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Retirement and Life Course Transitions

Inequality and the Welfare State in Europe

Mustafa Firat

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Netspar

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Radboud Universiteit

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Chapter 1

Synthesis

This chapter benefited from the feedback of Mark Visser and Gerbert Kraaykamp.

1.1 Background and Relevance

Populations are aging due to rising longevity and declining fertility, especially in the Western world, including the Netherlands and other European countries. This demographic shift means that people spend more years in retirement and draw pensions for longer, which puts financial pressure on pension systems. In response to this monetary challenge, many countries have reformed their pension systems by raising pension eligibility ages and limiting access to early retirement options, such as those based on unemployment and sickness. While these policy changes aim to promote longer working lives and ensure the sustainability of public finances, they also risk exacerbating social inequality in retirement.

Pension reforms can deepen existing inequalities in retirement because they usually overlook the diverse needs and life course experiences of individuals. This is a major concern, given that not everybody is able to extend their careers to older ages (Hinrichs, 2021). Although some are forced to work longer out of financial necessity, it is not feasible for others to do so, as they endure more impactful events during their life course (Kuitto & Kuivalainen, 2021). Those in physically demanding jobs, who are generally lower-educated, are more prone to developing health problems and hence face barricades to working longer, tending to exit the labor market involuntarily (Visser et al., 2016). Persons with interrupted work histories or caregiving duties, mostly women, are more likely to have financial insecurity in later life, since they accumulate lower pensions over time (Frericks et al., 2009). These patterns highlight how retirement is not a uniform endpoint but the continuation of unequal and often gendered trajectories generated by cumulative (dis)advantages throughout the life course.

Social inequality in retirement not only arises from variations in individual biographies, but is also governed by past and current institutional arrangements of countries. Since each country's social policies create exclusive circumstances for its subjects, the opportunities and constraints citizens encounter throughout their lives are shaped by where they live (Diewald, 2016). Countries provide various forms of social protection, ranging from education to childcare, housing to healthcare, and unemployment benefits to pensions. With monetary transfers, rights, and services, welfare states combat social inequality by promoting the well-being of all members of society at each stage of life, targeting especially those who are confronted with adversities like unemployment, disability, or poverty (Leisering, 2003). Pensions, in particular, are instrumental pillars of welfare states, with their generosity directly configuring the financial security of retirees. In the Netherlands, for instance, the universal and flat-rate state pension basically ensures that almost no one lives in poverty in old age. However, the design of welfare provisions can also reinforce inequality when they perpetuate assumptions that privilege continuous, full-time employment in conjunction with an intact, nuclear family constellation, which is a typical male life course (Sainsbury, 1999). Such policy designs risk underprotecting those, mainly women, whose trajectories feature care-related career breaks, part-time work, or union dissolution. On top of that, countries vary in the generosity of welfare provisions, with fluctuations within countries over the years (Scruggs & Ramalho Tafoya, 2022). This can alter workers' retirement decisions and post-retirement comfort, depending on when and where they built their lives. This is because welfare regimes have the potential to regulate the relationship between life courses and retirement outcomes, narrowing the gap in cumulative (dis)advantages in more redistributive systems while reinforcing or hindering gender disparities therein (Sieber et al., 2020).

1.2 Aims and Research Questions

My goal in this dissertation is to understand social inequality in retirement (1) from a life course perspective and (2) with a comparative lens. For this purpose, I define social inequality as disparities

between older adults with distinct types of pre-retirement life courses in retirement voluntariness, working in retirement, and retirement adjustment. I select these three outcomes because they each represent a distinct dimension of retirement and together reflect both continuity and change in later life, enabling a dynamic and comprehensive grasp of social inequality in retirement. By outlining complete life courses that capture transitions from work to retirement and into post-retirement life, I aim to uncover how prior work and family, but also health, caregiving, and volunteering trajectories, determine how people navigate a variety of phases and aspects of retirement across different countries.

My research questions are:

RQ1: *To what extent do life courses, including work, family, health, care, and volunteering trajectories before retirement, influence retirement voluntariness, working in retirement, and retirement adjustment across European countries and the Netherlands in particular?*

RQ2: *To what extent do welfare policies of European countries, and the Netherlands specifically, mitigate or aggravate the influence of pre-retirement life course trajectories on retirement voluntariness, working in retirement, and retirement adjustment?*

To trace gender differences, I attempt to answer these two questions separately for men and women as well. That is, I explore how the impact of pre-retirement life courses on retirement outcomes varies between men and women, and the degree to which these gendered patterns are dependent on the cross-national heterogeneity of welfare policies across European countries, including the Netherlands.

1.3 Previous Research

Cross-sectional Studies

Much of the literature on retirement has approached inequality in retirement from a cross-sectional viewpoint, prioritizing proximal factors around the time of transition as determinants of inequality. This snapshot perspective has improved our knowledge of disparities in retirement voluntariness, working in retirement, and retirement adjustment. For instance, it is established that involuntary retirement is more prevalent among men, less educated people, and those in lower occupational classes (Stiemke & Hess, 2022). Similarly, working in retirement is more common among individuals with higher education, better finances, and good health (Beehr & Bennett, 2015; Galkutė & Herrera, 2020). In terms of retirement adjustment, studies underline the relevance of finances, health, and voluntariness of transition, suggesting that retirees with more resources and control over retirement decisions adjust better to the changes that retirement brings (Barbosa et al., 2016; La Rue et al., 2022).

Notwithstanding these insights, most cross-sectional studies treat retirement outcomes as isolated responses to discrete life events or circumstances, bypassing the temporal buildup of (dis)advantages before retirement (Crystal et al., 2017). Several studies have recognized earlier life events, such as job tenure, duration of employment, and length of marriage, as relevant precursors, but they rarely deliver detailed accounts of how life experiences across different domains evolve and intersect over time to induce deviations in retirement (Ho & Raymo, 2009; Jones & McIntosh, 2010; Szinovacz & Davey, 2005). This disjointed picture leaves critical questions unanswered about how earlier life trajectories of work, family, health, and other domains collectively lay out who can retire voluntarily, who keeps working in retirement, and who adjusts well to retirement. To disentangle these questions, studies taking a life course perspective are needed.

Life Course Studies

The life course perspective offers a powerful alternative to the cross-sectional approach by viewing retirement as part of a process enacted by cumulative experiences across a person's whole lifespan (Elder et al., 2003). Instead of proximal factors, it underscores how the entirety of early-life transitions and resources elevate later-life inequalities (DiPrete & Eirich, 2006). A nascent body of scholarship has applied this perspective to retirement, and here I review research on the three outcomes considered in this dissertation: retirement voluntariness, working in retirement, and retirement adjustment.

First, studies using the life course perspective on retirement voluntariness found that individuals with non-standard or volatile work trajectories, marked by long-term part-time employment, self-employment, and unemployment, are less likely to retire voluntarily and more likely to retire involuntarily (Trentini, 2021; Visser et al., 2016). Nevertheless, these studies concentrated on work trajectories, neglecting the interaction of work with family and other life domains, such as health, informal care, and volunteering. This means that they did not elucidate how these domains might facilitate or offset career-related (dis)advantages collected over the lifespan. Moreover, most studies focused on single-country contexts and, thus, omitted how different welfare systems could influence the relationship between life course trajectories and retirement voluntariness (Stiemke & Hess, 2022).

Second, the life course research on working in retirement, also known as bridge employment, suggests that persons with prolonged exposure to part-time employment, self-employment, and unemployment show a greater uptake of bridge jobs (Brydsten et al., 2025; Burkert & Hochfellner, 2017; Dingemans & Möhring, 2019). This implies that those with more turbulent or disadvantageous careers may be more inclined or feel more compelled to continue working in retirement. However, like the literature on retirement voluntariness, the majority of studies have solely investigated work trajectories in relation to bridge employment (Beehr & Bennett, 2015; Galkutė & Herrera, 2020). Only one study probed into the joint impact of work-family trajectories from early to midlife (Madero-Cabib & Biehl, 2021). It revealed that full-time working divorced parents and part-time working married parents were more likely to engage in bridge employment, and non-employed parents had lower odds, irrespective of marital or parental status. Nonetheless, this study was limited in sample size and generalizability, relying on selective data from one city in Chile. Additionally, echoing the rest of the studies adopting a life course perspective, it took place in a single country, missing the possibility of clarifying how national contexts leave an imprint on the link between life courses and working in retirement.

Third, from a life course perspective, retirement adjustment is regarded not only as a matter of current resources and characteristics of the transition but also of how one has assembled work, family, health, care, and volunteering activities throughout life (Damman et al., 2015; Wang et al., 2011). While theory endorses this view, research provides scattered and weak evidence, inspecting the effect of single life events at certain life stages or multiple life events within isolated life domains (Barbosa et al., 2016; La Rue et al., 2022). To date, no study has combined different life domains into holistic trajectories to explain retirement adjustment, leaving it unclear how dynamic trajectories that span multiple stages and spheres of life influence people's capacity to integrate retirement into their lives.

Overall, previous research on retirement from a life course perspective remains underdeveloped in at least three regards. First, most studies attend to work trajectories, disregarding the family, health, care, and volunteering, which are essential to a broader appreciation of later-life outcomes. Second, cross-national research is rare, and when it exists, it frequently utilizes cross-sectional measures of institutional context, not capturing the cumulative exposure of individuals to the evolving policy environments over time. Third, although structural factors prompting retirement are well documented,

little attention has been paid to how gendered dynamics inform life courses and retirement within interdependent life domains, whether from a national or cross-national point. A more comprehensive grasp of retirement requires attention to interlocked life course trajectories across multiple domains, the role of changing welfare state contexts, and gendered patterns of cumulative (dis)disadvantages. By tackling these gaps, the life course perspective can yield more profound insights into the mechanisms that drive social inequality in retirement.

1.4 Advancements of the Dissertation

In this dissertation, I make an effort to address the shortcomings of previous research on retirement. I do so by conducting four empirical studies with a life course and cross-national approach. Each study constitutes an empirical chapter of this dissertation (Chapters 2, 3, 4, 5), as visualized in Figure 1.1. Through these studies, I introduce both theoretical and methodological advancements to the literature.

Theoretical Advancements

This dissertation advances the life course perspective on retirement by pursuing a (1) comprehensive, (2) resource-based, and (3) cross-national approach. This approach synthesizes micro-level mechanisms, such as path dependency, resources, and cumulative (dis)advantage, with macro-level frameworks, including the agency within structure model, institutional life course sociology, and welfare state theory. It also contributes to the development of gendered life course theory by exploring how said processes generate divergent retirement prospects for men and women. Below, I elaborate on these contributions, explaining how they deepen our understanding of retirement voluntariness, bridge employment, and retirement adjustment across diverse life courses and national contexts. While the first contribution revolves around the conceptualization of retirement and the life course, the subsequent ones engage directly with theory and the explanation of social inequality in retirement.

A Comprehensive Approach

The first theoretical novelty of this dissertation is that it studies retirement and the life course as a whole. Instead of treating retirement as a singular episode, I conceptualize it as a transformative and multilayered phase. I begin with the transition itself, enlightening whether individuals retire for voluntary (e.g., to enjoy life) or involuntary (e.g., being made redundant) reasons, contrasted against the conventional reason (i.e., becoming eligible for public pension). This speaks to agency and structure at the time of retirement, showing how people make decisions and settle their life courses within the parameters of their social setting (Settersten & Gannon, 2005). Then, I turn to life in retirement through bridge employment, exhibiting whether pensioners stay in employment or return to work after retiring, and illuminating who continues to work, why, and under what conditions. This responds to the increasingly blurred boundaries between work and retirement, capturing diverse experiences (Lassen & Vrangbæk, 2021). Finally, I come to life without work to unpack retirement adjustment, framed as adapting to the permanent exit from the labor market, embodying how retirees cope with losing functions once supplied by work, including financial, social, and psychological aspects (Damman et al., 2015). By tracing these outcomes chronologically, I see retirement as the continuation of prior events and give a thorough outlook of how older adults navigate retirement.

Contrary to previous studies, my treatment of the life course entails a longer stretch of the lifespan and embarks upon a wider range of life events. This enables a better understanding of the principle

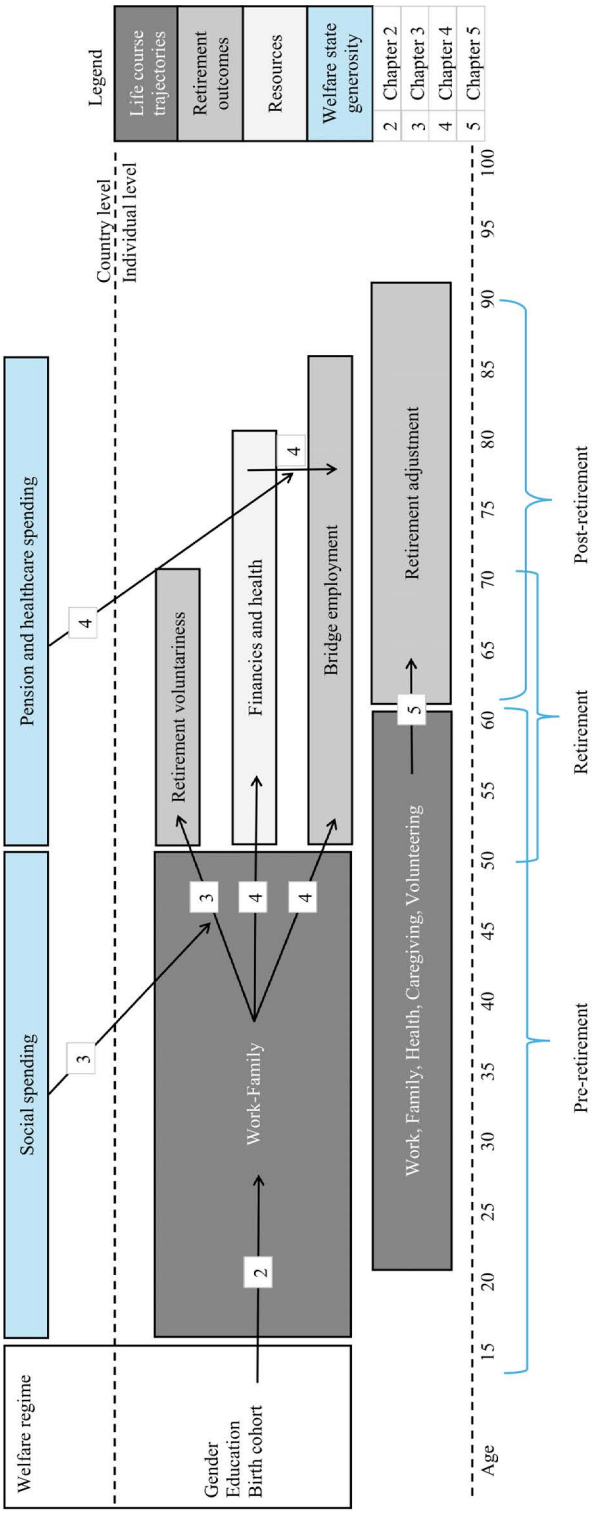

Figure 1.1 Conceptual framework of the dissertation

of path dependency, where events in later life depend on those in earlier life. By considering multiple spheres of life, I also better capture the interdependency of life domains, which is another key element of the life course perspective, as reflected in Krüger and Levy's (2001) master status hypothesis and Elder's (1985) concept of the differentiated life course, both implying that life courses are divided between roles across different life domains. Therefore, as opposed to targeting work histories alone, I examine how lives transpire across five intertwined domains: work, family, health, care, and volunteering. These domains are connected through social expectations, economic dependencies, and time commitments, with their interplay steering the opportunities and constraints over a person's life course, determining prospects in retirement (Burr et al., 2007; Machů et al., 2022; Raiber et al., 2024).

I start with charting out work-family trajectories across Europe while exploring how gender intersects with educational level, birth cohort, and welfare regime to gauge the life course trajectories people have. The gender-education intersection epitomizes how educational attainment conditions men's and women's access to roles and positions, the gender-cohort intersection conveys historical change and adds to the life course (de)standardization literature (Brückner & Mayer, 2005), and the gender-welfare regime intersection showcases how institutional arrangements may augment or alleviate gender inequality in work and family lives. Then, in the Dutch context, I sketch a gendered portrait of life course trajectories that range from work, family, and health to care and volunteering domains. These examinations contribute to our understanding of social inequality in retirement by demonstrating how an intersectional life course approach reveals the cumulative and context-dependent mechanisms through which gendered (dis)advantages emerge, persist, or shift over time and across institutional settings to define the nature of retirement and post-retirement well-being.

A Resource-Based Approach

The second theoretical novelty of this dissertation lies in connecting the life course trajectories to retirement outcomes by testing for mechanisms that elucidate this connection. To set this connection, I benefit from two resource-based perspectives: the cumulative (dis)advantage mechanism (Dannefer, 2003) and the dynamic resource perspective (Wang et al., 2011). The cumulative (dis)advantage mechanism states that (dis)advantages compound in a path-dependent way, meaning that earlier (dis)advantages create later ones. For example, unemployment at some point in a person's life predicts unemployment at a later time. This occurs through the resources associated with this lived experience, like 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. The dynamic resource perspective equivalently posits that temporal changes in financial, social, and psychological resources over time influence retirement outcomes. When these resources increase over time, retirement processes become smoother, but decreases in resources, such as declining health or social engagement, can hurt retirement prospects.

I harness these mechanisms to claim that distinct types of pre-retirement life courses confer varying levels of resources, which form social inequality in retirement. My general hypothesis is that people who deviate from a conventional life course distinguished by consistent employment in dependent jobs and stable marriage with children are more likely to retire involuntarily, to work in retirement, and to adjust worse to retirement because of accumulating restricted resources over the life course.

Since there is a lack of theory tailored to gender differences in life courses and the relationship between life courses and retirement outcomes, I refrain from formulating explicit hypotheses regarding gender. Still, I attend to gender differences and check whether the mechanisms that fuel

social inequality in retirement turn out similarly or differently for men and women. For example, from the life course research, we know that women are overrepresented in trajectories described by part-time and non-employment. This would signal that the findings of these trajectories pertain to women, but some men also have such trajectories. The question is whether the consequences of being in part-time employment or non-employment for retirement voluntariness, bridge employment, and retirement adjustment are similar for men and women. The answers to such questions have remained unclear. Accordingly, although theorizing about these gender differences falls beyond the scope of this dissertation, I undertake an explorative examination of gender differences, which solidifies a preliminary step towards gender-sensitive theory development on the life course and retirement.

A Cross-National Approach

The third theoretical novelty of this dissertation is in employing a cross-national and cross-level approach. This approach moves the field forward by linking micro-level life courses to macro-level institutional factors, enabling the study of how national systems moderate the accumulation of (dis)advantages and their ramifications for retirement. This means that I adopt the agency within structure model of the life course perspective, which aims to understand how individuals act within the boundaries of their social world (Settersten & Gannon, 2005). To specify how these processes come about, I embrace an institutional life course approach (Kohli, 2007; Mayer, 2009). I do so by harmonizing the life course perspective with resource accumulation theories at the individual level (Dannefer, 2003; Wang et al., 2011) and welfare state theories at the contextual level (Esping-Andersen, 1999; Leisering, 2003). As such, I set up an integrated model to explain how prospects and drawbacks faced during the life course depend on the institutional circles in which people live.

To this end, I test novel hypotheses and unveil how country characteristics can buffer or enlarge retirement inequalities rooted in earlier life experiences. For example, I expect that the more generous a welfare state is in social spending, the smaller the gap between people with trajectories of predominantly full-time work with a traditional family and people with less standard trajectories in the liability of retiring voluntarily or involuntarily (vs. conventionally). Likewise, I anticipate that in countries with more generous pension and healthcare systems, personal financial and health situations are likely less important when it comes to bridge employment, as generous pension and healthcare systems can narrow the gap between financially secure and insecure retirees and between those in good and poor health to access bridge jobs.

For retirement adjustment, I do not go into a cross-national comparison but take a single-country approach to zero in on a country that stands out as a generous and retiree-friendly welfare state: the Netherlands. The Netherlands is also a compelling case to delve into gender differences in the relationship between life course trajectories and retirement outcomes. This is because, compared to neighboring countries, the Netherlands transitioned later to progressive gender norms, with government policies in the 1950s and 1960s being conservative, reinforcing traditional gender roles and limiting female labor market participation. Therefore, I create male and female life course trajectories separately and then connect them to different aspects of retirement adjustment. With this approach, I build upon and move beyond the dynamic resource perspective on retirement adjustment (Wang et al., 2011) by tracing resources embedded in the cumulative interplay of entire and multidomain life course trajectories and by addressing gendered structures in how these trajectories are formed, experienced, and linked to one's capacity to adjust to retirement.

Methodological Advancements

To answer the research questions and substantiate the theoretical advancements of this dissertation, I examine how individual trajectories across multiple life domains and periods are associated with retirement voluntariness, bridge employment, and retirement adjustment. I also investigate how welfare state generosity moderates these associations. This requires accounting for relationships that unfold across different time points and levels of analysis, including people's experiences in the past, their current circumstances, and the institutional contexts in which their life courses have developed. Given the complexity of these relationships, I need and exploit (1) fine-grained micro data that is collected over time, with detailed retrospective and prospective components, (2) longitudinal macro data that reflects the actual social policy landscape during the period people developed their life courses, and (3) advanced statistical techniques that take care of the diversity and complexity of life courses while handling the multilevel structure of data to explain the mechanisms of interest.

Fine-Grained Micro Data

The first methodological strength of this dissertation is the use of fine-grained micro data from the Survey of Health, Ageing and Retirement in Europe (SHARE; Börsch-Supan et al., 2013) and the Netherlands Interdisciplinary Demographic Institute's Pension Panel Study (NPPS; Henkens et al., 2017). SHARE distributes data that fits exceptionally well to achieve the majority of my objectives. It provides both retrospective and prospective data from adults aged 50+ across Europe, making it uniquely suited for a cross-national study of life course trajectories and the connection of these trajectories with retirement outcomes. Using the retrospective data, I paint the most extensive picture of how pre-retirement work-family trajectories look across Europe, spanning more than a century of lives forged between 1908-2017, with over 2.8 million person-years in 28 countries. Combining the retrospective data with the prospective data, I deliver the first systematic examination of the association of work-family trajectories with retirement voluntariness and bridge employment.

However, SHARE does not involve specific information on retirement adjustment, and it lacks retrospective data on life domains other than work and family. This is why I turn to NPPS when studying retirement adjustment. Recruiting Dutch workers aged 60-65, NPPS assesses many life events across work, family, health, care, and volunteering. As such, it empowers me to conduct one of the most comprehensive analyses of the life course, with measures tapping into more transformative episodes, such as upward mobility, job stability, and professional consequences of childcare. Another advantage of NPPS is that it opens the door to a specific yet multidimensional conceptualization of retirement adjustment, with items on how much retirees miss different aspects of work after retirement, including income, social contacts, societal prestige, and role fulfillment. These data and measurements capacitate me to render the first holistic life course study of retirement adjustment.

Longitudinal Macro Data

The second methodological strength of this dissertation is the use of longitudinal macro data. To unveil how institutional contexts influence the link between individual life courses and retirement outcomes, I integrate time-varying macro-level indicators of welfare state generosity and tie them to the years in which individuals developed their life courses. This approach responds to calls in the life course and retirement literatures to consider the institutional surroundings people were actually exposed to during key periods of their lives. Hence, my approach works towards a methodological improvement

over previous studies, sharpening the application of the institutional life course approach to retirement.

To study the moderating role of welfare state generosity in the relationship between work-family trajectories and retirement voluntariness across Europe, I deploy yearly data on social spending from OECD (2019) and Eurostat (2022), comprising the total of benefits in eight domains: old age, survivors, disability, health, family, unemployment, housing, and social exclusion. These benefits are quantified annually as a percentage of GDP, for each year from 1980 to 2021, across 28 EU countries. Then, I match this data with each respondent's work-family trajectory years based on their residence country. This aids me in acknowledging the specific policy environment that individuals were embedded in during the formative years of their work and family lives and nurtures an empirical test of how long-term exposure to social spending patterns relates to retirement voluntariness.

In the analysis of bridge employment, where I disentangle the interaction between a person's finances and health and a country's welfare generosity, I synchronize time-varying country-level indicators of pension and healthcare expenditure with the years in which people were observed as working or permanently retired. This is done with Eurostat's expenditure statistics (Eurostat, 2023, 2024), which again offer annual data as a percentage of GDP across 28 EU countries in the last two decades. Pension expenditure comprises benefits related to old age, disability, early retirement, and partial and survivors' pensions, while healthcare expenditure concerns all functions related to the provision of medical goods and services, including but not limited to curative, preventive, and rehabilitative care.

The link between macro-level policy generosity and individual-level outcomes is thus established not through static country averages but through a time-sensitive and life course-informed integration of data. This enables a dynamic, temporally aligned analysis of how social policy affects retirement voluntariness and bridge employment, and ultimately hints at potential implications for adjustment to post-retirement life. It also enables a novel disaggregation of the institutional conditions under which individuals make retirement decisions, distinguishing between the long-term policy environments that sculpt life course trajectories and the more immediate conditions at the moment of retirement.

Advanced Statistical Techniques

The third methodological strength of this dissertation is the use of advanced statistical techniques. To handle the richness and complexity of data, I analyze life course trajectories and retirement processes through multichannel sequence and cluster analysis (MCSCA), latent class analysis (LCA), and multilevel regression analysis with mediation and moderation models.

MCSCA is an extension of sequence analysis, serving as an ideal tool for the methodological implementation of the theoretical notion of life course trajectories (Aisenbrey & Fasang, 2010). Using MCSCA, I set up joint work-family trajectories by registering the complex relations between different life domains and detecting not only the occurrence but also the timing, duration, and order of events across these domains. Once confirming differences and similarities between individuals in work and family histories, I group them into homogeneous clusters, based on theoretical and statistical criteria.

In the gendered analysis of life courses in the Netherlands, I employ an LCA, separately for men and women (Weller et al., 2020). LCA considers response patterns across observed variables to find qualitatively unique and unobserved subgroups in the data. The subgroups share certain features and exhibit homogeneity, called latent classes, and it is assumed that membership in these classes explains patterns of responses across indicators. Class membership is predicated on the profile of individuals' scores, and again, I decide on the number of classes based on theoretical and statistical criteria.

To complement these person-centered typological approaches, I undertake advanced regression techniques to test hypotheses about mechanisms and contextual effects in the relationship between life

courses and retirement. Specifically, I carry out multilevel regression analyses that incorporate both mediation and moderation models. These models allow me to explore how individual-level predictors are shaped by or interact with macro-level institutional variables while dealing with the nested structure of the data. When the primary interest lies in individual-level processes, I estimate regression models with robust standard errors, clustered by country and organizational levels. All in all, these analytical strategies permit me to combine theoretical sophistication with empirical precision, making it possible to rigorously evaluate both person-level and context-dependent processes of retirement.

1.5 Summary of Findings

The empirical chapters in this dissertation are organized in chronological order of the life course. In line with the conceptual framework in Figure 1.1, I start with the pre-retirement life course (Chapter 2), go into the moment of retirement (Chapter 3), move to the immediate aftermath of retirement (Chapter 4), and end with the post-retirement phase of permanent retirement (Chapter 5). Table 1.1 gives an overview of the empirical chapters, and here I summarize the findings of each chapter.

Chapter 2 – Work-Family Trajectories Across Europe: Differences Between Social Groups and Welfare Regimes

The aim of Chapter 2 is to identify typical work-family trajectories before retirement and examine how these trajectories differ by gender, educational level, birth cohort, and welfare regime. In doing so, this chapter provides one of the most comprehensive pictures of the life course in Europe. Using retrospective data from SHARE on 28 countries, I reconstruct individual trajectories with MCSCA, where at each age, a person is in one work and one family state. In the work domain, they can be full-time employed, part-time employed, self-employed, unemployed, sick/disabled, or non-employed. In the family domain, they can be single (never married/cohabited), partnered (married/cohabiting), or unpartnered (separated/divorced/widowed) while having or not having (biological/adopted) children.

The results reveal six typical trajectories from age 15 to 49. The most common trajectory is (1) an uninterrupted career of full-time employment and a lifelong marriage, including children. This is more prevalent for men, higher-educated individuals, and those in social-democratic, Eastern European, and Baltic welfare regimes. The other trajectories deviate from this one in the work and/or family domain. Those differing in the family domain are all characterized by continuous full-time work. One is featured by (2) prolonged divorce, observed frequently among women, younger cohorts, and in social democratic and Baltic welfare regimes. The other involves (3) a long-term history of singlehood or childlessness, which happens more to men, higher-educated people, and those living in conservative welfare regimes. The trajectories differing in the work domain include predominantly (4) part-time, (5) non-, and (6) self-employment, all alongside stable relationships and having children. Part-time work is highly dominant among partnered mothers and younger cohorts, especially in conservative welfare regimes. Non-employment occurs particularly in Southern European and liberal welfare regimes and among married women with children, lower-educated individuals, and older cohorts. Self-employment is more widespread among men and in Southern European and liberal welfare regimes.

The gender-split analysis indicates that educational and welfare regime differences in work-family trajectories mimic the pooled analysis. Yet, differences are more pronounced for women. For example, relative to men, women with lower education are less likely, and women from Eastern European and

Table 1.1 Overview of empirical chapters

Chapter	Predictor	Outcome	Mediator	Moderator	Data and Sample	Analysis	Main Findings
2	Gender, educational level, birth cohort, welfare regime	Work-family trajectories			SHARE $N = 77{,}512$ from 28 EU countries	Multichannel sequence and cluster analysis, multinomial logistic regression analysis	• There are six common types of work-family trajectories in Europe, combining full-time employment with (1) marriage and children, (2) divorce and children, (3) singlehood or childlessness, and marriage and children with (4) part-time, (5) non-, (6) self-employment, from age 15 to 49. • These trajectories are stratified by gender and educational level and differ across birth cohorts and welfare regimes.
3	Work-family trajectories	Retirement voluntariness		Social spending in a country	SHARE, OECD, Eurostat $N = 48{,}775$ from 28 EU countries	Multilevel regression analysis, with moderation models	• People who diverge from the trajectory of full-time work and marriage with children are less likely to retire voluntarily and more likely to do so involuntarily. • In countries with higher social spending, the chance of voluntary retirement increases for married parents working part-time, but decreases for non-workers.

4	Work-family trajectories	Bridge employment	Financial and health situation	Pension and healthcare spending in a country	SHARE, Eurostat $N = 58,644$ from 28 EU countries	Multilevel regression analysis, with mediation and moderation models	• Compared to retirees with full-time careers and nuclear families, full-time working singles or childless couples take bridge jobs more for financial comfort and less due to poor health, while poor health limits non-employed partnered parents' bridge employment, and financial hardship hinders it for the divorced, part-time employed, and self-employed. • The link between a person's finances and bridge employment is weaker in countries with higher pension spending, but only for those aged 65+, and a country's higher healthcare spending is tied to more bridge employment for retirees in better health.
5	Life course trajectories (work, family, health, care, volunteering)	Retirement adjustment			NPPS $N = 4,267$ from the Netherlands	Latent class analysis, linear regression analysis	• Between the ages of 20-59, there are four common types of life course trajectories among Dutch men. Relative to (1) those with a traditional male life course, (2) lifelong volunteers adjust better to retirement, financially, socially, and psychologically. (3) Men making careers through upward mobility miss work's prestige less, but (4) men with late-career mobility do not differ from the first group in any aspect of retirement adjustment. • There are also four common types of life course trajectories among Dutch women. Contrasted against (1) those with a traditional female life course, (2) women combining paid work with caregiving and volunteering adjust better to retirement, financially, socially, and psychologically. (3) Work-oriented carers do not differ from the first group, while (4) mothers re-entering employment after childcare face more financial struggles in retirement.

SHARE: The Survey of Health, Ageing and Retirement in Europe. NPPS: The Netherlands Interdisciplinary Demographic Institute's Pension Panel Study.

Baltic welfare regimes are more likely to follow the full-time work and partnered-parent trajectory. Differences at the intersection of gender and other variables are minimal for self-employment and full-time employment trajectories involving non-standard family arrangements. The most notable gender differences emerge among non-working and part-time working partnered parents, with lower-educated women and those from conservative welfare regimes being more likely to follow these trajectories. Cohort effects also differ by gender, with younger women more likely and younger men less likely to have the most typical trajectory, and opposite trends observed for other trajectories.

The work-family trajectories found in Chapter 2 lay the groundwork for Chapters 3 and 4.

Chapter 3 – Work-Family Trajectories, Welfare State Generosity, and Retirement Voluntariness Across Europe

My goal in Chapter 3 is to explain the voluntariness of the retirement transition from a comparative life course perspective. Specifically, I strive to know how a person's pre-retirement work-family trajectory relates to retirement voluntariness and whether this is influenced by a country's welfare generosity. In this way, I aim to provide the first empirical study of the relationship between work-family trajectories and retirement voluntariness from a cross-national, life course perspective. To this end, I use the work-family trajectories from Chapter 2, combine them with prospective data from SHARE, and enrich them with time-varying country data from OECD and Eurostat on social spending, which coincide with the timeline of people's work-family trajectories. To assess retirement voluntariness, I rely on respondents' self-reported reasons for retiring to determine whether they retired voluntarily or involuntarily. Following Radl (2014), I also add a third category, called conventional retirement, which refers to retiring upon becoming eligible for public pensions.

Compared to retiring conventionally, multilevel regression analyses demonstrate that individuals who diverge from the most common trajectory of full-time employment and marriage with children are less likely to retire voluntarily and more likely to do so involuntarily. To be more precise, parents in a stable relationship with part-time employment are less likely to retire voluntarily, whereas full-time working singles or childless couples and unpartnered people with children are more likely to retire involuntarily. Self-employed partnered parents are less inclined to retire both voluntarily and involuntarily, implying that they wait until they qualify for a public pension. Non-employed individuals exhibit a trend akin to the self-employed, showing lower odds of retiring for both voluntary and involuntary reasons, probably because they, too, have to wait for the public pension option.

Cross-level interactions point to the role of welfare state generosity, but in complex ways. On the one hand, countries with more generous welfare states offset the disadvantages of people whose trajectory is characterized by part-time employment, as with higher levels of social spending, their chances of voluntary retirement improve. On the other hand, people with a trajectory featuring non-employment have an even lower likelihood of voluntary retirement in countries that spend more on welfare benefits, potentially because they are not well-covered in contribution-based social security schemes. For people with other types of trajectories, welfare state generosity does not play a moderating role.

Findings separated for men and women highlight gender differences in both individual- and cross-level effects. Divorced mothers in full-time work are more likely to retire involuntarily than married mothers, a pattern not found among fathers. Full-time working single or childless women are more likely to retire voluntarily than mothers, while single or childless men are more likely to retire involuntarily than partnered fathers. Part-time working married fathers are less likely to retire voluntarily than their full-time counterparts, a difference absent among mothers. Non-working fathers face more, while housewives face less involuntary retirement. Finally, generous social spending in a country reduces involuntary retirement risks, but only among part-time employed, married mothers.

Chapter 4 – The Role of Work-Family Trajectories, Finances, Health, and Welfare State Generosity in Bridge Employment Across Europe

The purpose of Chapter 4 is to understand what drives people to work in retirement. To do so, I first establish the relationship between work-family trajectories and bridge employment, focusing on the financial and health mechanisms that explain this relationship. Then, I delve into the role of a country's pension and healthcare expenditures in moderating these mechanisms. As in Chapter 3, I use the work-family trajectories from Chapter 2, merge them with prospective data from SHARE, and obtain time-varying country data from Eurostat, corresponding to the year in which a respondent retired. As such, I render the first empirical study that not only examines the relationship between work-family trajectories and bridge employment, but also attempts to explain this relationship while doing so in a cross-national setting. I measure financial and health circumstances through self-reported items of financial comfort and general health, and I operationalize bridge employment as the simultaneous receipt of income from any type of job and any type of pension, with those reporting only pension incomes coded as permanent retirees.

The results of multilevel analyses indicate that, relative to people in nuclear families with continuous full-time work, and compared to being a permanent retiree, those who remain single or childless are more likely to have a bridge job out of financial comfort and are less likely to be bridge-employed because of poorer health. Poorer health also prevents non-employed partnered parents from bridge employment, although it does not play a mediating role for individuals with other trajectories. Yet, financial hardship is a blockage for those who had a divorce and were part-time, non-, and self-employed. Notably, finances generally suppress the link between work-family trajectories and bridge employment, reflecting the importance of other mechanisms, such as socio-psychological motivations.

Furthermore, there are significant interactions between personal resources and national expenditures. The relationship between a person's finances and their probability of taking on bridge employment is less pronounced in countries with higher pension expenditures, but this is true only for those aged 65+. This suggests that generous pension systems may alleviate disparities in bridge employment linked to different work-family trajectories. Additionally, greater healthcare expenditure in a country is associated with higher uptakes of bridge employment, particularly among retirees in good health.

Finally, the results for men and women are largely similar. A notable difference emerges for single or childless women with full-time careers: their take-up of a bridge job does not appear to be driven by financial or health factors. In contrast, for divorced men and those who worked part-time, both finances and health affect bridge employment. Yet, the fact that finances act as suppressors, not mediators, suggests that other influences (e.g., socio-psychological motivations) may be more relevant for these men.

Chapter 5 – Life Course Trajectories and Retirement Adjustment Among Men and Women in the Netherlands

Chapter 5 intends to extend the holistic life course perspective to retirement adjustment. In doing so, it exploits data from NPPS and refines how I have so far studied life courses, exploring gender differences in greater detail. In this chapter, I implement not only work and family trajectories, but also health, care, and volunteering trajectories in the pre-retirement period, and I investigate these comprehensive trajectories separately among men and women. This enables me to deliver one of the most comprehensive analyses of the life course in terms of the breadth of the life course domains

considered, while also providing the first empirical study of retirement adjustment from a holistic life course approach. For the sake of digging into gender differences, I concentrate on a single country that has a generous welfare state: the Netherlands. After identifying the most common trajectories for men and women, I run gender-split regression analyses on three different aspects of retirement adjustment: financial, social, and psychological. These aspects are evaluated as missing income (financial), social contacts and societal prestige (social), and role fulfillment (psychological) from work.

LCA results reveal four distinct trajectories among men. The largest trajectory manifests (1) the traditional male life course, marked by less career change over time, with decreasing promotions in midlife and stability in other domains. Compared to these men, (2) those with lifelong volunteering adjust better to retirement, financially, socially, and psychologically. Despite family and health issues, (3) men making careers through upward mobility miss work's prestige less, but (4) men with late-career mobility are similar to the reference group, not differing in any aspect of retirement adjustment.

There are also four unique trajectories among women. The largest represents (1) the traditional female life course, including women who have stability in all domains of life, with the most active part being stopping work for children. These women switch employers until midlife, experience varying occupation changes, and receive promotions later, recovering from career breaks for children. Relative to these women, (2) those who combine paid work with the unpaid work of caregiving and volunteering adjust better to retirement, missing work-related income, prestige, and role fulfillment less, while (3) work-oriented carers do not differ from women with traditional trajectories. However, (4) mothers re-entering employment after childcare differ, as they financially struggle in retirement. In general, none of the identified groups of male and female retirees differ in terms of missing social contacts at work, which is actually the most strongly missed aspect of work in the sample.

1.6 Discussion

This dissertation set out to provide a better grasp of social inequality in retirement, leading to three general conclusions.

General Conclusions

Life Course Trajectories Drive Social Inequality in Retirement

My first conclusion is that life course trajectories drive social inequality in retirement. This conclusion rests on the findings that corroborate and extend the resource-based theoretical frameworks. Consistent with the cumulative (dis)advantage mechanism (Dannefer, 2003) and the dynamic resource perspective (Wang et al., 2011), earlier experiences characterized by stability, security, or upward mobility and availability of favorable events, like the ability to combine paid work with volunteer work alongside lasting partnership and good health, nurture (non)material resources in midlife, which translate into more control over retirement decisions and comfort in retirement. Yet, prior and prolonged exposure to adverse events, including non-employment, career breaks for caregiving, union dissolution, or limited civic participation, brings restricted agency and fewer resources in both the retirement transition and post-retirement. These patterns highlight that retirement outcomes are not isolated endpoints but reflections of lived biographies shaped by intersecting life domains and long-term exposure to structural constraints. In other words, they expound on the interdependency of different domains over the life course and confirm the importance of path dependency: disadvantages in early and midlife persist into old age.

Therefore, my answer to RQ1 is: life courses before retirement, covering work, family, health, care, and volunteering trajectories, exert a substantial influence on whether people retire voluntarily or involuntarily, why they choose or are forced to work in retirement, and how well they adapt to life after retirement, both across European countries and in the Netherlands. As such, I show that retirement inequalities are rooted in the accumulation of (dis)advantages across the life course, which is made possible by examining multiple life course domains simultaneously and acknowledging their interplay over time.

Welfare State Generosity Can Reduce, But Also Reinforce, Social Inequality in Retirement

My second conclusion is that welfare state generosity can relieve the disadvantages associated with life course trajectories, but it can also inadvertently bolster ongoing inequalities in retirement. This conclusion builds on the findings that the effects of life courses and individual resources on retirement prospects are conditional on the institutional arrangements of countries. For instance, in countries with more generous welfare states, married parents with part-time employment histories – mostly women – are more likely to retire voluntarily than conventionally, suggesting that social protection measures are capable of enhancing agency in the retirement transition for those with weaker labor market attachment. Similarly, financially vulnerable retirees aged 65+ come across fewer obstructions to taking up bridge employment in countries with more generous pension systems, implying that redistributive pension policies can facilitate workforce participation in later life.

However, these equalizing effects are not universal. In the same institutional settings where part-timers benefited, people with long periods of non-employment (practically, women ending their careers after marriage for housekeeping and caregiving) are less likely to retire voluntarily. This is perhaps due to eligibility criteria for welfare benefits, which are contribution-based in most countries, penalizing those with brief paid work, no matter if they did the unpaid work of housekeeping and caregiving. Besides, in countries with higher healthcare expenditure, the odds of bridge employment are higher among persons in good health, effectively widening the gap between healthy and unhealthy retirees in obtaining post-retirement jobs. These findings mean that welfare states may correct inequalities for certain life course patterns while exacerbating them for others, depending on who policies include or exclude.

The Dutch context clearly illustrates this complex dynamic. As a country with generous welfare provisions, the Netherlands generally fosters a positive environment for retirees. This is evident in the comparatively high rates of voluntary retirement and bridge employment observed in the cross-national analyses of this dissertation, as well as in the relatively constructive retirement adjustment found in the Dutch case study. Nevertheless, these desirable outcomes are not evenly distributed. The Dutch findings suggest that people, exclusively women, whose life courses include care-related career interruptions or restricted access to the labor market, are most disadvantaged in retirement, particularly in financial terms. Thus, even within a generous welfare state, the degree to which individuals benefit from institutional support depends on their prior life course trajectories.

These results substantiate the agency within structure model (Settersten & Gannon, 2005) and elevate the institutional life course approach (Kohli, 2007; Mayer, 2009), uniting micro-level resource-based perspectives (Dannefer, 2003; Wang et al., 2011) with macro-level welfare state theories (Esping-Andersen, 1999; Leisering, 2003). Within this framework, I postulate that people do not make retirement decisions in a vacuum; rather, their decisions are induced by how welfare institutions in their country reward or punish different life course configurations. While some individuals can leverage policies to enhance their agency over retirement, others, especially those whose trajectories depart from the normative configuration of continuous employment, remain structurally disadvantaged.

Hence, my answer to RQ2 is: welfare policies of European countries, and the Netherlands specifically, might both mitigate and aggravate the influence of pre-retirement life course trajectories on retirement voluntariness, bridge employment, and retirement adjustment. By highlighting how institutional contexts differentially shape the (dis)advantages associated with diverse life course trajectories, I indicate that welfare state generosity can simultaneously reduce and reinforce inequalities in retirement, revealing the persistent structural nature of (dis)advantage even within supportive policy environments.

Gender Defines Life Courses and Retirement in Unequal and Context-Specific Ways

My third conclusion is that gender defines the composition of life courses, and this gendered composition gives rise to unequal retirement outcomes, but these inequalities are neither uniform nor inevitable; they emerge from the overlap between individual experiences and institutional contexts. This conclusion is grounded in the exploratory gender findings from across Europe and the Netherlands.

For example, I find that women are overrepresented in trajectories involving part-time positions, labor market inactivity, career breaks, union dissolution, caregiving, and volunteering. Accordingly, women carry a greater propensity for involuntary retirement, have less access to bridge jobs, and endure struggles, especially financially, in adjusting to retirement. However, the gendered patterns in retirement are not monolithic. The relation between life courses and retirement varies within gender groups, depending on employment intensity, partnership history, and parental status. For instance, divorced mothers in full-time work exhibit more involuntary retirement than married mothers, which is not found among men. Likewise, single or childless women are more likely to retire voluntarily than mothers, while the reverse is the case for men. This challenges simplistic assumptions about gender differences and stresses the value of differentiating between within-gender experiences over the life course.

Institutional arrangements, too, interact with gendered trajectories. Welfare generosity plays an active role in buffering the risks associated with female-dominated pathways, notably by raising retirement voluntariness among part-time working married mothers. Yet, these institutional benefits are less obvious for men in comparable trajectories or for women whose caregiving roles prevented them from employment. This indicates that welfare states, while potentially equalizing, also entail inherent assumptions about normative life courses that can differentially reward or penalize men and women.

These findings point to a need for theory development that addresses the gendered complexity of life courses, their implications for retirement, and the role of welfare states. While current frameworks offer valuable grounds, they tend to treat gender as a background variable. What is lacking is a theory that systematically accounts for how gender interacts with diverse configurations of life courses, and how these interactions influence retirement and are influenced by institutional arrangements. This dissertation suggests that gender should be framed as a dynamic axis of stratification that crosses various life domains and policy areas to produce unequal, yet context-contingent, retirement outcomes. I, therefore, call for a gender-sensitive and context-dependent life course perspective that moves beyond binary comparisons and embraces the heterogeneity of within-gender experiences.

Policy Implications

The conclusions of this dissertation suggest three main recommendations for developing social policies that should aim to reduce social inequality in retirement and life course transitions. These

policy recommendations are primarily directed at governments across Europe, with particular emphasis on Eastern and Southern European countries, where populations are more rapidly aging, whereas social protection measures remain limited compared to Western and Northern European countries, reflecting greater potential for policy development.

Address Cumulative Disadvantage Across the Life Course

The first recommendation is to address cumulative disadvantage across the life course. The findings indicate that retirement inequality stems from the buildup of adversity over time, and policies influence this process both during key phases earlier in life and at the time of retirement. Therefore, policies should adopt a life course perspective, targeting disadvantages as they unfold. Important points for intervention include early labor market exit for childcare, long-term informal caregiving, health problems in later life, and family disruptions such as divorce and widowhood. Policies that promote smooth transitions between life stages and prevent resource depreciation can make a difference. Potential measures to implement are: improving paid parental leave, providing affordable childcare, subsidizing nursing homes, and protecting against the insecurity of precarious work (e.g., temporary contracts, part-time, freelance jobs). For example, Sweden's extensive paid parental leave system, which offers up to 480 days per child with a high income replacement rate, supports parents in balancing work and family without risking labor market detachment, promoting continued employment (Duvander & Johansson, 2012). These measures might reduce the susceptibility to involuntary retirement, enable extended working lives, and facilitate better retirement adjustment.

Recognize and Support Diverse Life Course Trajectories

The second recommendation is to recognize and support diverse life course trajectories. The analyses reveal that many people follow trajectories involving caregiving, part-time work arrangements, periods of labor market detachment, or self-employment. These trajectories are often penalized by contribution-based pension schemes and insurance-based welfare regulations that privilege continuous full-time employment in traditional family configurations. To enhance equity in retirement, social protection systems should better accommodate individuals with interrupted careers, unpaid care roles, or self-employed jobs, expanding their access to pensions and other benefits. One example of such a policy is the introduction of care credits in pension systems, which are already in place in some countries (e.g., the United Kingdom), although they are directed more at childcare (Vlachantoni, 2008). It is important to extend these care credits to other types of care, such as caring for older people, given that the need for elderly care has increased and will further increase in aging societies, and especially because informal caregiving often stands in conflict with employment. Therefore, compensating for the time spent on unpaid care by counting them as equivalent to (at least some part) of paid work for pension accrual can make a difference. Valuing these unpaid contributions and respecting the realities of different life courses are essential for inclusive institutional coverage.

Consider Gender Differences and Differences Among Individuals of the Same Gender

The third recommendation is to consider gender differences and differences among individuals of the same gender. The results demonstrate that women are overrepresented in non-standard life course trajectories and encounter specific risks in retirement, but patterns also vary within groups of the same gender with different life course trajectories. This underscores the need for institutions to acknowledge the full complexity of lives, paying attention to both disparities between men and

women and divergencies within them. To address this complexity, social protection systems should move beyond binary gender comparisons and encompass the heterogeneity of life courses. To this end, one idea is to integrate gender impact assessments into the design of policies, such as adjusting eligibility rules to account for fragmented work histories and introducing benefits that do not implicitly favor traditional male breadwinner models, so that existing inequalities are not maintained or deepened. For example, Germany's mothers' pensions regulation rewards child-rearing periods with financial support and improves pension entitlements for women with children, recognizing the long-term financial penalties of unpaid caregiving for mothers. With such gender-sensitive policies, welfare states can then meet their equalizing promise and contribute to more equitable lives over the aging process.

Limitations and Directions for Future Research

The conclusions and recommendations of this dissertation should be read in light of its limitations, which inform future research in many ways. First, my analysis of the life course relies on retrospective surveys, which are efficient but susceptible to recall bias. Older respondents might misdate distant jobs or family events, and for some people, complex life histories can be hard to accurately remember. However, research comparing retrospective data with prospective data suggests that recall bias in retrospective data is often limited. For instance, in SHARE, it is less than 10% (Garrouste & Paccagnella, 2011). Nevertheless, because these are self-report measures, it is likely that some events, such as unemployment, are underreported, implying that some of the current findings could be an underestimation. Although this cannot be completely controlled, and data inevitably contain measurement errors, future studies should seek data that avoids recall bias in retrospective data and social desirability bias in survey data. This can be achieved by combining longitudinal panels with administrative records, which would provide actual information about careers, earnings, family dynamics, and benefit histories relevant to retirement. However, it takes a long time to collect such data over the years, posing challenges of feasibility and making it almost impossible to study entire life courses.

Second, at the time of conducting each empirical study, I made an effort to follow best practices in the field, using mostly reliable measures and doing my best with the data at hand. Yet, as is the case in many existing studies in the literature, some measures in this dissertation do not directly assess the concepts I examine. This is particularly the case for outcome variables. For example, retirement voluntariness is inferred from the reason for leaving work, and not directly observed. This bears the risk of misclassifying some retirees as voluntary or involuntary, as objective and subjective measures do not always coincide. Likewise, bridge employment is based on reporting income from work and retirement, making it prone to underreporting. To address these issues, future research should aim to go beyond proxy indicators by adopting methods that better capture how individuals experience and understand key life transitions. Mixed-methods designs, where quantitative surveys are complemented by qualitative interviews, can provide deeper insights into how people interpret their decisions around retirement or work participation. Diary studies, if integrated into longitudinal panels, could help cross-validate the timing, duration, or order of events, while also illuminating the meaning individuals assign to them. In doing so, these approaches would not only improve measurement validity, but also better reflect the subjective complexity and lived experience at the heart of life course research.

Third, although I improved upon the extant research by using longitudinal data at the macro-level and by linking them to the period corresponding to individual lives, which is an approach that is rarely achieved in the literature, the macro-level variables I used are generally broad indicators to proxy welfare state generosity. They cannot reflect finer policy elements, such as conditional subsidies

for delayed retirement, variations in early retirement benefits, and sector-specific incentives. This means that I often examine within-country heterogeneity and temporal change in aggregate terms, which can mask some of the cross-national differences. Therefore, future studies could take advantage of detailed policy variables, like gender-specific statutory retirement ages, early retirement eligibility rules for workers in certain sectors, or labor market activation measures for older workers. Taking into account regional differences within countries might also help unpack within-country heterogeneity. Ideally, these data should be longitudinal, enabling the investigation of how institutional changes over time contribute to the formation of life courses. Comparative life course research would thus benefit from closer integration of micro data with dynamic, context-specific macro data to more precisely identify institutional effects on retirement.

Finally, due to the absence and limited presence of data, I did not consider ethnicity, migration background, or sexuality, which can actually compound the disadvantage, leading to more inequality. For example, women of color, immigrants, and LGBTQ individuals are likely to be confronted with labor market discrimination and caregiving penalties over the life course. Hence, the models in this dissertation may have understated heterogeneity, treating life courses as relatively homogeneous groups without these social layers. Therefore, researchers are advised to embrace an intersectionality approach, which acknowledges that multiple identities coincide and shape individual lives, jointly determining inequalities. More specifically, building on the gender focus adopted here, researchers can model how gender interacts with other social axes to drive retirement inequality. As an idea, it would be valuable to examine cohorts of male and female migrants or ethnic minorities. Applying an intersectionality framework could unearth hidden disparities in life courses, retirement, and access to welfare benefits. This, of course, requires oversampling minority groups. To achieve this, researchers could consider targeted sampling strategies in regions with higher minority populations, collaborate with community organizations to boost participation, or combine multiple data sources to increase minority representation.

Final Remarks

This dissertation advances our understanding of retirement as a process shaped by the interplay between individual life courses and institutional contexts. It shows that inequalities in retirement are neither sudden nor isolated; they are the cumulative result of lived biographies structured by gender, educational level, historical time, and social policy. By integrating a longitudinal, multidimensional, and cross-national lens, the dissertation contributes to both theory and policy debates on aging and retirement. As societies continue to age and life courses grow increasingly diverse, developing equitable retirement systems requires recognizing and addressing the long arm of earlier life (dis)advantages, so that later life can be a stage of dignity, security, and choice for all.

Chapter 2

Work-Family Trajectories Across Europe: Differences Between Social Groups and Welfare Regimes

A slightly different version of this chapter has been published open access as:
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The authors jointly developed the idea and design for the study reported in this chapter. Firat prepared the data, conducted the analysis, and wrote the main part of the manuscript. Visser and Kraaykamp contributed substantially to the manuscript.

The study on which this chapter is based on was presented at the Life Course Analysis: Theoretical Perspectives, Methodological Innovations, and Empirical Applications Conference in Rostock on October 26-27, 2021 and the Day of Sociology in Groningen on June 16, 2022, and received feedback at the Sociology Seminar at Radboud University on January 20, 2022.

Abstract

Work and family trajectories develop and interact over the life course in complex ways. Previous studies drew a fragmented picture of these trajectories and had limited scope. The study reported in this chapter provides the most comprehensive study of work-family trajectories to date. Using retrospective data from the Survey of Health, Ageing and Retirement in Europe, we reconstructed work-family trajectories from age 15 to 49 among almost 80,000 individuals born between 1908 and 1967 across 28 countries. We applied multichannel sequence and cluster analysis to identify typical trajectories and multinomial logistic regression models to uncover their social composition. The results revealed six common trajectories. The most common trajectory represents continuous full-time employment with a partner and children. Women, the lower educated, and persons from conservative and liberal welfare regimes are underrepresented in this trajectory, whereas men, higher educated people, and those from social-democratic, Eastern European, and Baltic welfare regimes are overrepresented. The other trajectories denote a deviation from the most common one in either the work or family domain. Mothers in a stable relationship generally work part-time or not at all. When mostly in full-time employment, women are more likely to be divorced. Lower educated persons are less likely to have work-family trajectories characterized by full-time work and singlehood, childlessness, or divorce, yet more likely to be non-employed for large parts of their lives with a nuclear family arrangement. Younger cohorts are underrepresented in non-employment, but overrepresented in part-time employment along with a partner and children as well as full-time employment with divorce. Individuals from Southern European and liberal regimes are more likely to be non-working and self-employed partnered parents, and those from social-democratic regimes are more likely to be full-time employed divorced parents. We also found pronounced gender differences in how educational level, birth cohort, and welfare regime are associated with work-family trajectories. Our findings highlight the socially stratified nature of work-family trajectories in Europe. Potential implications for inequalities in later life are discussed and examined in later chapters.

2.1 Introduction

Work and family are central to our lives. Many of us feel content to have a job, a partner, or children. Yet, our roles as workers, partners, and parents do not always reconcile. Life course events and transitions in one domain can motivate or force us to increase or decrease our involvement in another domain. For example, a person may postpone family formation to establish a career (Aassve et al., 2007), a full-time employed person may switch to part-time employment upon becoming a parent (Biemann et al., 2012), or a divorced person may return to employment after being non-employed to compensate for the lack of a partner's financial support (Struffolino et al., 2020). As exemplified in these situations, how we arrange our work life is not independent from how we arrange our family life (and vice versa). Therefore, it is essential to understand how work and family jointly evolve over an extended period of a person's life.

Understanding the joint development of work and family lives is important because it informs us about social inequality, as the interdependency between work and family varies along social and structural lines (Fasang & Aisenbrey, 2022). Although some people enjoy the privilege of connecting work and family harmoniously, others face systematic barriers, with events in their work life restricting their family life (or vice versa). For instance, men and highly educated people tend to have more stable careers and partnerships because their work and family lives often sustain each other (Madero-Cabib & Fasang, 2016; McMunn et al., 2015). In contrast, the employment careers of women are usually interrupted by marriage and childbirth, while less educated people's partnerships are more susceptible to dissolution due to job insecurity (Hogendoorn et al., 2022; Lu et al., 2017). Thus, life-long patterns of concurrent events and transitions in combined work and family lives, known as work-family trajectories, are socially stratified.

However, our knowledge of work-family trajectories and their social stratification is still limited (for a review, see Han & Mortimer, 2023; Machů et al., 2022). When examining work-family trajectories and their social composition, most studies singled out a specific gender (e.g., women) in a certain country (UK: Aassve et al., 2007; Spain: Davia & Legazpe, 2014). Studies including both men and women generally concentrated on a single country (Germany: Engels et al., 2019; US: Fasang & Aisenbrey, 2022; Switzerland: Madero-Cabib et al., 2016) or compared just two countries (Aisenbrey & Fasang, 2017; McDonough et al., 2015). When they included more countries and covered different welfare regimes, they again focused on a specific gender (e.g., women; Ice et al., 2020) or relied on relatively small sample sizes for some countries while also not examining how work-family trajectories differed across social groups other than men and women (Uccheddu et al., 2022). Only a few studies involved multiple social groups (e.g., based on gender, education and/or birth cohort) and multiple countries. Yet, these studies examined whether work and family trajectories have become more complex over time and to what extent complexity (i.e., a summary measure quantifying the number of states and transitions between states within a sequence) varies cross-nationally (Van Winkle & Fasang, 2021), but not how work-family trajectories unfold over the life course among different social groups and countries. When they did so, their focal point was restricted to earlier trajectories (e.g., until age 35) covering the transition to adulthood, but lacking information on work-family trajectories at older ages (Lesnard et al., 2016; Schwanitz, 2017). These limitations hamper the generalizability of existing research findings because they rest on data from particular social groups, life phases, historical times, and institutional contexts.

In this chapter, we address these limitations and offer several contributions. First, we focus on a longer lifespan, more states defining work and family sequences, and more individuals and countries than any prior study, thus better capturing the continuity, multiplicity, and heterogeneity of work-

family trajectories. We examine work-family trajectories from age 15 to 49, considering that these are the prime ages at which people shape their work-family life. We do so for almost 80,000 individuals across 28 European countries, covering nearly 2.8 million person-years between 1923 and 2017. Hence, we increase generalizability to a wider population. Second, we assess how these work-family trajectories are differentiated by gender, educational level, birth cohort, and welfare regime. Unlike most studies, we look at these factors simultaneously, controlling the associations for each other (cf. Schwanitz, 2017). This informs us about the socially stratified nature of work-family trajectories and how social inequalities unfold over the earlier life course. Third, we unravel how said work-family trajectories differ between men and women by educational level, birth cohort, and welfare regime. Although the influence of these factors is considered to be gendered (Becker, 1981; Bukodi et al., 2012; Sainsbury, 1999), past work has paid inadequate attention to this, with a narrower scope and thus generalizability (e.g., gender differences in family trajectories by educational level in Finland; Jalovaara & Fasang, 2015). Finally, we make our analytical code producing the trajectory data publicly available, which may facilitate future research (link provided in the Analysis section). The work-family trajectories from this chapter could be used by other researchers in cross-national, multilevel analyses to show the later-life outcomes of the earlier-life work-family trajectories, such as retirement and well-being. In fact, this is what we do. In Chapters 3 and 4 of this dissertation, we use the work-family trajectories identified in this chapter.

We use data from the 3rd and 7th waves of the Survey of Health, Ageing and Retirement in Europe (SHARE, Börsch-Supan et al., 2013). SHARE provides fine-grained retrospective and cross-national data suitable for answering our research questions: 1) *How do people's early-to-midlife work-family trajectories look like across Europe* and 2) *to what extent are gender, educational level, birth cohort, and welfare regime associated with these trajectories*? To answer the first question, we employ the cutting-edge technique of multichannel sequence and cluster analysis, which is an ideal method for our purpose, as it accounts for interdependencies between multiple life domains and delivers holistic trajectories (Aisenbrey & Fasang, 2010). To answer the second question, we present average marginal effects to make the interpretation of the results based on multinomial logistic regression models more intuitive. As part of answering the second question, we also explore whether differences between educational levels, birth cohorts, and welfare regimes in the work-family trajectories vary between men and women.

2.2 Theoretical Notions

According to the life course perspective (Elder et al., 2003), the timing, order, and duration of life events shape individual lives and work-family trajectories, which are contingent on socio-demographic characteristics (e.g., gender and education), historical time, and the institutional and normative context. We follow this perspective to study work-family trajectories. Given the explorative nature of our approach, we do not formulate explicit hypotheses on the number or content of the work-family trajectories. Yet, although we do not know a-priori which work-family trajectories we will find, we develop general expectations about who is more likely to be overrepresented in which type of trajectory. We also explore whether educational level, birth cohort, and welfare regime relate differently to work-family trajectories for men and women. This implies that we empirically take a gendered perspective on life courses. Theoretically, however, we do not go into much detail about it and leave it more explorative. This is because there is a lack of theory and research on the intersection of gender with educational level, birth cohort, and welfare regime when it comes to work-family trajectories. We hope that our research contributes to theory development on these intersections.

Figure 2.1 Conceptual model

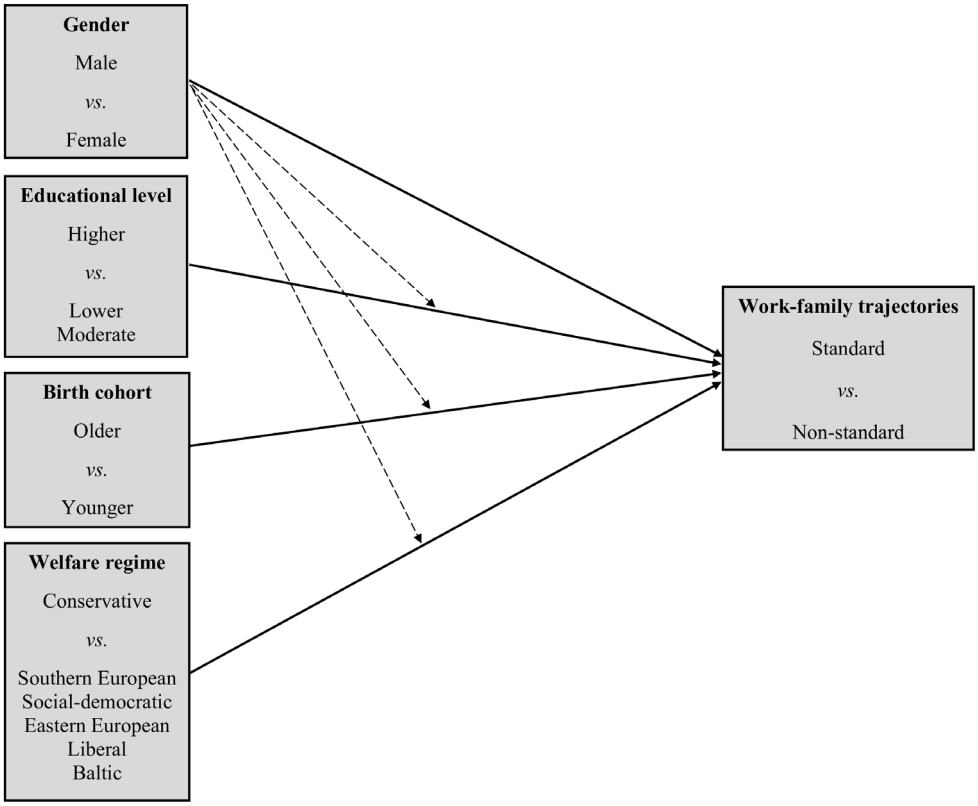

Figure 2.1 illustrates our conceptual model.

Gender

Work-family trajectories are gendered (Madero-Cabib & Fasang, 2016). A reason for this is the traditional male breadwinner and female homemaker norm. Because of the church's role and a conservative political discourse, men were assumed to be (full-time) employed and provide for their families. In contrast, women were usually assigned the caregiver or housekeeper role, with non-employment and economic dependence on men throughout the marriage. While this norm dominated life courses in Western countries in the previous century, and it still is relevant, it has lost support owing to historical changes (e.g., secularization) and institutional reforms (e.g., childcare provision) (Trappe et al., 2015). Consequently, the convention of non-employment among (married) women has weakened and (part-time) employment has increased, also because of increasing educational attainment among women (Cunningham, 2008).

Women's family life has significantly changed with their increasing labor market participation. While pursuing a career, they delay family formation and remain single for longer than men (Aassve et al., 2007). Once in a partnership, they make more relationship transitions than men, exhibiting more divorce (Van Winkle & Fasang, 2021). When they give birth, they often stop working or reduce

working hours, but men's employment career is usually uninterrupted (Biemann et al., 2012; McMunn et al., 2015). If women want to rejoin the workforce after childbirth, they have difficulties securing a job or they earn less than their pre-birth wage, facing the motherhood penalty (Lu et al., 2017).

Despite women's emancipation and policy efforts to support the dual-earner/dual-carer model, the male breadwinner and female homemaker norm persists. On the one hand, women are encouraged to join the workforce with initiatives like formal childcare services. On the other hand, they bear the labor market penalty of becoming a parent. This disparity can harm work-family reconciliation and foster non-standard work-family trajectories in women's earlier life (McMunn et al., 2015). Thus, it is likely that women are overrepresented in trajectories characterized by weaker or interrupted labor market attachment (e.g., part-time employment, non-employment, unemployment) in combination with being married and having children or continuous full-time employment in combination with non-traditional family arrangements (e.g., singlehood, childlessness, divorce). For men, trajectories marked by consistent workforce participation and stable family lives are more likely to occur. However, men are likely overrepresented in trajectories containing self-employment, as women prefer non-employment and part-time employment over self-employment due partly to gender-based barriers to entrepreneurship (Verheul et al., 2012).

Educational Level

Education is another factor shaping work-family trajectories. According to the theories of human capital (Becker, 1964), signaling (Spence, 1973), and segmentation (Piore, 1975), lower educated people have fewer opportunities in the labor market and generally acquire more insecure positions than higher educated people. Therefore, they encounter more unemployment (Visser et al., 2016a). They also receive less on-the-job training and develop fewer professional skills over their career, disposing them to be perceived as less productive than their higher educated counterparts (Cairó & Cajner, 2018). As these practices impair human capital accumulation in lower educated individuals, employers prefer hiring the higher educated. The lower educated are usually located in the secondary segment of the labor market, which offers jobs with lower status and pay (Gesthuizen et al., 2011), or they become part-time employed, mostly involuntarily (Cam, 2012). Moreover, they often work in physically demanding jobs under harsher conditions, increasing the risk of disability (Falkstedt et al., 2014). The labor market insecurity faced by lower educated individuals affects their family life. For example, it has repercussions for partnering dynamics (Scherer, 2009). Lower educated persons (and their partners) experience more life (e.g., economic) strains, which cause unstable partnerships (Hogendoorn et al., 2022), leading to divorce and single parenthood (Zimmermann & Konietzka, 2018). It also has repercussions for parenting practices. For instance, lower-educated couples engage less in childcare activities because of their employment conditions, especially when they have three or more children (Biegel & Maes, 2024). This implies that how couples combine and divide work and family responsibilities may be different for those who have higher or lower education (Visser & Fasang, 2018) in combination with having a few or several children.

Hence, it is likely that the lower educated are overrepresented in work trajectories distinguished by career interruption (e.g., unemployment, disability), non-employment, or precarious employment (e.g., part-time, self-employment), along with family trajectories including disruptions, such as separation or divorce, while the higher educated are overrepresented in more stable and advantageous work-family trajectories that combine continuous full-time employment, lifelong partnership, and parenthood. However, considering that education offers unequal returns for men and women in the work and family domain (Becker, 1981), the role of education in work-family trajectories might differ by gender. This is because the opportunity costs of remaining outside the workforce to get married

and rear children are higher for higher educated women. They invest time and effort into higher education and thus have stronger incentives to work and delay family formation (Aassve et al., 2007). Contrastingly, it is often less costly for lower educated women to engage in early family formation and leave the labor market (Berrington & Pattaro, 2014). So far, there has been scarce research testing such gender differences, which is important to address because it can illuminate the gendered nature of social stratification in work-family trajectories.

Birth Cohort

The destandardization hypothesis posits that life courses in Europe have become less institutionalized and orderly over time and, instead, more individualized and unpredictable (Brückner & Mayer, 2005). People would increasingly deviate from conventional life courses in the face of increasing options or constraints. Work-family trajectories transform across birth cohorts because each cohort grows up and enters adulthood under specific structural, institutional, and cultural circumstances. It is assumed that older cohorts (i.e., those born before or during the Second World War [WWII]) grew up under harder life conditions, but started their career and formed their family under less unequal working conditions and more traditional family norms (Crystal, 2018; Lesthaeghe, 2010). These older cohorts established their career and family in the post-war era of economic expansion, industrialization, and institutional and cultural support for marriage and fertility. However, younger cohorts (i.e., those born after WWII) entered the workforce and started a family when labor markets, social norms, and gender roles were transforming (Crystal, 2018; Lesthaeghe, 2010). Hence, there might be differences in workforce participation and family formation between older and younger cohorts. For example, it is known that part-time jobs, temporary positions, self-employment, unmarried cohabitation, and childlessness have become more common in the last decades due to globalization, labor market flexibilization, and normative changes regarding marriage and fertility (Damman & Von Bonsdorff, 2021; Kalleberg, 2000; Zimmermann & Konietzka, 2018). Yet, there might also be differences within these broader groups. For instance, among older cohorts, those who experienced WWII as adults (e.g., born between 1900 and 1920) may differ from those experiencing it as teenagers or children (e.g., born between 1921 and 1940). The ones experiencing it as adults faced the immediate challenges of rebuilding and stabilizing their work and family lives, while the ones experiencing it as teenagers or children may have internalized different values and attitudes regarding work and family due to disruptions in their family structure and social environment.

This highlights the role of socialization as a mechanism that distinguishes cohorts in their work-family trajectories. Older cohorts were socialized when part-time work was uncommon, female employment was perhaps unorthodox, and marriage and parenthood were cherished. Younger cohorts were socialized when these work and family norms were shifting, which coincided with the improved position of women in society due to increased female schooling (Epstein et al., 2014). Changes in educational opportunities, gender roles, and labor markets accelerated changes in people's values and attitudes regarding partnering and parenthood – a process known as the second demographic transition (Lesthaeghe, 2010). At the same time, family formation became less governed by religious institutions because of secularization (Studer et al., 2018). These transformations eroded the prevalence of traditional work and family arrangements, resulting in less social control and stigmatization of non-traditional work and family arrangements, such as part-time, self-, and unemployment in the work domain and union dissolution, unmarried cohabitation, and singlehood in the family domain (Biemann et al., 2012; Zimmermann & Konietzka, 2018). Yet again, there might be divergences within the broader groups of older and younger cohorts. For example, younger cohorts (e.g., born between 1945 and 1966) are often ascribed a tendency towards postmodern values, more divorce, and a higher

emphasis on education and career. However, there could be differences within this cohort depending on, for example, how influential their exposure to the 1969 movements was and whether they entered the labor market and parenthood in the late 1960s or the early 1980s.

Nevertheless, the influence of economic, normative, and socialization processes on work-family constellations is expected to be most pronounced among those born in the 1970s and onwards, as they are the ones who underwent these processes the most (Lesnard et al., 2016). Given that the cohorts we observe in the SHARELIFE data were all born before that period, we acknowledge that it might be hard to establish cohort differences in earlier work-family trajectories (see Van Winkle & Fasang, 2021). Still, there is a tangible basis for cross-cohort heterogeneity, with the broader group of younger cohorts (i.e., born after 1945) being overrepresented in work-family trajectories that combine part-time jobs, self-employment, or incapacity to work with cohabitation without marriage, divorce, or childlessness, while the broader group of older cohorts (i.e., born until 1945) being more likely to follow continuous full-time employment, stable marriage, and parenthood trajectories over the earlier part of their life course.

Cohort change in work-family trajectories is plausibly different for men and women. The reason is that institutional reforms (e.g., parental leave, childcare provision), shifts in gender role attitudes, and the service sector expansion are likely to have made more prominent changes in women's lives. In the past, women usually left the workforce after marriage or childbirth. Today, many women delay family formation to build a career, although part-time work and career breaks are still more common among women (McMunn et al., 2015). Such changes are likely less pronounced for men, resulting in more similar male work-family trajectories over the earlier life course (Van Winkle & Fasang, 2021). Despite this, prior work on work-family trajectories has largely ignored gendered cohort effects (e.g., Uccheddu et al., 2022).

Welfare Regime

Alongside who one is and when one is born, life courses are also shaped by where one lives because the institutional context in countries, mainly their social policies, shape the individual life course by creating opportunities and constraints (Mayer, 2009). The notion of welfare regime proposes two principles to capture and distinguish between countries' social policy contexts (Esping-Andersen, 1990, 1999) that are also central to work-family trajectories. One is decommodification, which refers to the degree to which the state protects people against labor market risks. The other is defamilization, namely the reduction of dependence on the family so that people can uphold a standard of living through paid work or the social security system. Although these two principles are useful to distinguish countries in terms of their welfare regime, they (especially decommodification) have been criticized by feminist scholars for being relatively blind to gender. Authors such as Orloff (1993), Leitner (2003), Bambra (2004), and Verbakel et al. (2023) have taken a gendered approach and suggested that countries should be classified into welfare regimes based on the extent to which they are familialistic and defamilialistic. In a familialistic state, the family is the main provider of care, which means that women are encouraged or expected to care for children and older people. On the contrary, in a defamilialistic country, the state is responsible for providing care; hence, it enables women to participate in the labor market by offering formal care services.

Empirical research categorizing countries by their level of decommodification, familialism, and defamilialism has found similar clusters of welfare regimes, suggesting that differences in clusters result essentially from the name given to a type of welfare regime rather than the actual grouping of countries (Gauthier & Koops, 2018). In fact, Bambra (2004) developed a typology of welfare regimes based on familialism and found that it closely aligned with Esping-Andersen's (1990) decommodification-

based typology. This indicates that, despite its limited attention to gender, Esping-Andersen's (1990) framework still reflects important cross-national differences in women's experiences of the welfare state.

The literature has identified several welfare regime types, which differ in the level of decommodification, familialism, and defamilialism. In conservative regimes (e.g., Germany), people in paid work are eligible for unemployment, sickness, and pension benefits, indicating higher decommodification. However, these benefits usually strongly depend on prior earnings, with continuous full-time employment being rewarded. When it comes to the family domain, conservative regimes seem to be between familialistic and defamilialistic, since care tasks are often attributed to women, although childcare provisions are also available. Yet, gender inequality in employment tends to be high in conservative regimes (Möhring, 2016).

Social-democratic regimes (e.g., Sweden) are more redistributive and progressive than conservative regimes, being more decommodified and more defamilialistic. They have universal social security systems and provide generous sickness, unemployment, and pension benefits, regardless of prior earnings (Esping-Andersen, 1990, 1999). Besides employment protection, social-democratic regimes make childbearing less costly for employment careers through childcare provision and parental leave (Pezer, 2022). Moreover, they support the dual-earner model, where couples equally participate in the workforce. Therefore, women's labor market attachment is relatively strong in social-democratic regimes.

Liberal regimes (e.g., Ireland) are market-oriented, thus low on decommodification. There is a strong reliance on the market, which produces welfare in a socially unequal way, partly because individuals bear the responsibility of labor market risks. Individuals with high incomes and prestigious occupational positions have easier access to welfare benefits and can, for instance, retire earlier or have a partner who may exit the workforce more easily (Komp-Leukkunen, 2019). Consequently, people in these regimes are more active in the workforce. Yet, this workforce participation is gender unequal, because these regimes encourage a traditional breadwinner-caretaker norm, similar to conservative regimes (Korpi et al., 2013).

Eastern European countries present an interesting case. Despite being different from conservative and social-democratic regimes, Eastern European countries can be expected to show similar work-family trajectories over the life course (Aidukaite, 2009). This is particularly expected among our respondents, who were born before the 1970s and did not wholly experience the life course outcomes of the transition from communism to democracy (Van Winkle & Fasang, 2021). Under communist rule, the state owned the labor market and made employment mandatory, meaning that the state provided continuous full-time employment careers for all citizens. During that era, Eastern European countries also adopted pro-natalist policies that encouraged marriage and childrearing in combination with high decommodification by strict employment protection and gender-equal practices regarding caring (Van Winkle & Fasang, 2021).

However, it can be problematic to put all Eastern European countries into one type of welfare regime. There is heterogeneity among Eastern European countries in relation to employment careers and family arrangements (Möhring, 2016). This is because their transition process from communism to democracy has been different, potentially leading to different constellations. Specifically, as indicated by Van Winkle and Fasang (2021), countries from Central Europe and the Balkans are more similar to one another in that they are characterized by lower complexity in work-family trajectories, whereas countries from the Baltic region are more different, characterized by higher complexity. This suggests distinguishing between Eastern European regimes (covering Central and Balkan countries, e.g., Poland and Bulgaria) and Baltic regimes (e.g., Latvia) will be more informative than lumping all Eastern European countries together.

Southern European regimes (e.g., Spain) provide fewer means for decommodification and defamilialism, thereby representing familialistic welfare states. Welfare provisions in these regimes are fragmented and not interventionist. Individuals have limited access to welfare benefits because of lower public expenditures on social security programs (Ferrera, 1996). Thus, people rely largely on family support to deal with negative labor market forces and exploit their own resources to raise a child, sometimes at the expense of their career stability (Gough, 1996). This basically implies that women usually take the responsibility of informal caregiving (i.e., childcare and elderly care) on their shoulders (Möhring, 2016), paving the way for a high gender inequality in labor market participation (Schmitz et al., 2023).

Overall, it can be argued that work-family trajectories marked by continuous full-time employment and stable nuclear families are more common in countries with higher decommodification, lower familialism, and higher defamilialism. In contrast, fragmented work histories, whether because of caregiving responsibilities, health constraints, or macro-economic conditions, tend to arise in contexts where public support is limited, reliance on the family is high, and individuals bear more responsibility for navigating labor market risks. As such, people from liberal and Southern European regimes are likely to experience more discontinuous or constrained work-family trajectories. By comparison, those from conservative, social-democratic, Eastern European, and Baltic regimes are more likely to follow steadier and more continuous trajectories, although Baltic countries may show greater diversity in trajectories relative to other Eastern European states. Importantly, the consequences of interrupted or reduced employment participation may vary depending on the welfare context. For instance, in conservative and social-democratic regimes, part-time work is better protected and more socially integrated: part-time workers receive proportional social benefits and equal pay per hour, making it a viable option for combining paid work with caregiving responsibilities (Bosch, 2004). This suggests that policy arrangements not only shape life course patterns, but also can determine how costly or sustainable certain trajectories are.

Again, the role of welfare regimes in shaping work-family trajectories is gender-specific as policies are gendered. Policies can be more relevant for women because welfare regimes differ in their regulatory potential for women with incentives to work while forming a family (Sainsbury, 1999). For example, social-democratic regimes promote dual-earners/dual-carers through public childcare provisions and parental leave policies for both men and women. Women in these countries are therefore expected to be more likely to forge a work-family trajectory of strong labor market attachment with a nuclear family arrangement than women in conservative regimes, where policies in place support the male breadwinner model. Yet, only a few studies have examined such dynamics by comparing work-family trajectories across different regimes for a large number of countries (Komp-Leukkunen, 2019; Schmitz et al., 2023), drawing an incomplete picture. Furthermore, research has mostly contrasted the US with European countries (McDonough et al., 2015; Van Hedel et al., 2016), restricting our knowledge on European countries. This knowledge gap is valuable to address for understanding how cultural norms (e.g., attitudes on female employment) and institutional contexts (e.g., parental leave and childcare provision) that are embedded in welfare regimes function differently for men's and women's work-family lives.

2.3 Methods

Data

We used data from the 3rd and 7th wave of SHARE, called SHARELIFE (Börsch-Supan, 2022a, 2022b). To handle these data, we adapted the Stata code from the Gateway to Global Aging Data

platform (Wahrendorf et al., 2023). SHARELIFE provides longitudinal information on several aspects of the life course, including work and family. It is a retrospective survey of older people, potentially susceptible to memory bias. However, studies comparing the retrospective SHARELIFE data with the regular SHARE data found negligible inconsistencies between responses. For example, Garrouste and Paccagnella (2011) showed that SHARELIFE respondents remembered their past employment, partnership, and parenthood events fairly well, with less than 10% recall error. Havari and Mazzonna (2015) further validated the accuracy of other retrospective information in SHARELIFE, such as childhood health and socio-economic status. SHARELIFE offers reasonably accurate retrospective information, as it follows a life history calendar technique (Schröder, 2011), which helps respondents recall past events better.

Using probabilistic sampling and computer-aided face-to-face personal interviewing, SHARELIFE collects data from people aged 50+ across Europe and Israel. The first SHARELIFE was conducted in 2008-2009 in 13 countries and targeted individuals born before 1957. The second SHARELIFE was fielded in 2017 in 28 countries and targeted people who did not participate in the first round and were born before 1967. Both rounds also involved the respondents' partners living in the same household (if applicable), irrespective of their age. The respondents are representative of the European population aged 50+ at the moment of the interview and have their residence in the respective country. Here, we describe the past life histories of people. Our sample may thus not necessarily be representative of the older population residing in a given country during the period our analysis covers.

We applied some selection criteria. First, we removed respondents from Israel (n = 2,131) because we focus on European welfare regimes. Second, we excluded persons younger than 50 (n = 1,413) as we aim to reconstruct full work-family trajectories before age 50 with equal sequence length. We do not look at work-family trajectories after age 50 because this would result in unequal and incomplete life courses for many respondents. Third, we omitted people who retired before age 50 (n = 2,092) to capture the trajectories of those who were not yet withdrawn from the labor market, ensuring that we do not include a selective group. Fourth, we dropped participants with missing information in their work or family histories (n = 7,370; after filling in missing work states up to 5 years), remaining with a sample of 78,698 individuals in 28 European countries. Finally, for the multivariate analysis, we deleted cases with missing values on the predictors (n = 1,186). Respondents in our analytical sample (N = 77,512) are aged 50-104 (M = 66.65, SD = 9.62) and born between 1908 and 1967.

Measurement

Work Trajectories

We defined work trajectories with seven mutually exclusive states combining annual information from age 15 to 49 on paid work, unpaid work, and not working: (1) full-time employment, (2) part-time employment, (3) self-employment, (4) unemployment, (5) disability, (6) non-employment, and (7) missing. To code these states, we used the start and end dates of job spells and the respondent's self-reported employment status (i.e., full-time, part-time, or self-employment) based on a categorical variable. For the periods in which no paid work was reported, gaps refer to either unemployment, disability, or non-employment. Unemployment covers both searching and not searching for a job. Disability refers to the inability to work because of ill health. Non-employment includes full-time education, home/family work, voluntary/community work, and other events (e.g., military service, traveling). Lastly, we included gaps of up to 5 years for which no information was available as missing. We chose 5 years as the upper limit because it enabled us to retain an optimal amount of data. Further details on the construction of work trajectories are given in the Appendix A.

Family Trajectories

Family trajectories are measured by six mutually exclusive states integrating annual information from age 15 to 49 on partnership and parenthood: (1) single, no children, (2) single, children, (3) partnered, no children, (4) partnered, children, (5) unpartnered, no children, and (6) unpartnered, children. We again used each episode's start and end date. Partnership states are based on when a respondent started living with a partner and/or when they stopped living together. Single implies that a person is not in a married/cohabiting partnership (including never married/cohabited), though they can be in a living-apart-together relationship. Partnered means that a person is in a married/cohabiting partnership (97% of cases concern marriage). Unpartnered reflects whether partners broke up, a partner died, or other dissolution events (e.g., moving to a nursing home; 83% of cases concern divorce). After creating partnership states, we merged them with whether or not the respondent had a living child. To code parenthood, we used the child's birth year for biological children and the adoption year for adopted children. We did not differentiate between the number of children because that increases the number of family states for each partnership state, which would then run into computational memory issues during the cluster analysis, as the analysis has a limit on the number of sequences. Different from the work trajectories, respondents with at least one missing family state were excluded from the analysis. The rationale for this exclusion and further details on the construction of family trajectories can be found in the Appendix A.

Predictors

Table 2.1 provides descriptive statistics for the predictor variables.

Gender is a binary variable, coded male or female.

Educational level is the highest degree achieved based on the International Standard Classification of Education 1997 (ISCED 97). We condensed the seven codes of ISCED 97 into three categories: low educated (codes 0, 1, and 2), moderate educated (codes 3 and 4), and high educated (codes 5 and 6).

Birth cohort is a categorical variable, classifying people into two broader groups according to their birth year. We coded birth years until 1945 as older cohorts and birth years after 1945 as younger cohorts to distinguish between pre- and post-war cohorts. This is because WWII is considered to be a turning point for economic expansion, modernization, and industrialization, which strongly influenced people's life course (Crystal, 2018). Yet, we also tried birth cohort as a linear variable and

Table 2.1 Descriptive statistics of the predictor variables ($N = 77{,}512$)

		%
Gender		
	Female	55.97
	Male	44.03
Educational level		
	Low educated	37.68
	Moderate educated	40.94
	High educated	21.38

Table 2.1 (continued)

		%
Birth cohort		
	Younger cohort	59.76
	Older cohort	40.24
Welfare regime		
	Southern European	21.10
	Cyprus	1.41
	Greece	4.48
	Italy	6.37
	Malta	1.47
	Portugal	1.30
	Spain	6.09
	Social-democratic	11.35
	Denmark	4.65
	Finland	2.20
	Sweden	4.51
	Eastern European	27.20
	Bulgaria	2.23
	Croatia	2.57
	Czechia	5.74
	Hungary	1.74
	Poland	6.10
	Romania	2.25
	Slovakia	2.45
	Slovenia	4.11
	Conservative	29.52
	Austria	4.19
	Belgium	7.09
	France	5.17
	Germany	5.67
	Luxembourg	1.45
	Switzerland	3.42
	The Netherlands	2.54
	Liberal (Ireland)	0.83
	Baltic	9.98
	Estonia	5.75
	Latvia	1.86
	Lithuania	2.38

divided birth years into more than two groups. For example, the results based on four groups of birth cohorts (before 1940, 1940-1945, 1946-1950 and after 1950) can be seen in the Appendix A, Table A12. Because these alternative specifications did not lead to different conclusions and birth cohorts based on multiple groups showed similar patterns of results, we preferred the simpler, binary measurement.

We grouped countries into six welfare regime types based on Esping-Andersen (1990, 1999) and others (e.g., Ferrera, 1996), which is a grouping that also largely overlaps with typologies suggested by feminist scholars, including Leitner (2003) and Bambra (2004), and has been used in previous studies, like Uccheddu et al. (2022). Southern European regimes included Cyprus, Greece, Italy, Malta, Portugal, and Spain. Social-democratic regimes involved Denmark, Finland, and Sweden. Eastern European regimes covered Bulgaria, Croatia, Czechia, Hungary, Poland, Romania, Slovakia, and Slovenia. Baltic regimes involved Estonia, Latvia, and Lithuania. Conservative regimes contained Austria, Belgium, France, Germany, Luxembourg, Switzerland, and the Netherlands. We listed Ireland under the liberal regime, being the only country in SHARELIFE data falling into this welfare regime type. When we examined the prevalence of work-family trajectories by individual countries rather than welfare regime types, we arrived at similar conclusions (see Table A3 in the Appendix A).

Analysis

Trajectory Construction

We applied multichannel sequence and cluster analysis using the TraMineR (Gabadinho et al., 2011) and WeightedCluster (Studer, 2013) packages in R to construct early-to-midlife work-family trajectories. Multichannel sequence analysis is an extension of sequence analysis, which is one of the most established holistic approaches to constructing life course typologies from longitudinal categorical data (Aisenbrey & Fasang, 2010; Gauthier et al., 2010). Therefore, it provides an ideal tool for the methodological implementation of the theoretical notion of trajectory by allowing us to identify (and visualize) sequences of different states and transitions that are dissimilar from one another.

We calculated dissimilarities between individual sequences with the optimal matching metric, which measures the extent to which each pair of individual sequences is dissimilar based on how costly it is for one sequence to turn into another. For this, we needed to specify two types of costs: substitution costs and insertion/deletion (indel) costs. Substitution costs are the costs of replacing a state in a sequence with another state. Indel costs are the costs of inserting or deleting a state from a sequence. We used a user-defined cost matrix (see Tables A1.1 and A1.2 in the Appendix A) instead of following the common procedure in which all costs are set equal. This enabled us to make theoretical choices in the matching process by taking into account that some transitions can be considered more costly than others. For example, the transition from full-time employment to unemployment can be regarded as more costly than the transition from full-time to part-time employment.

After obtaining a matrix of pairwise dissimilarities, we subjected it to Ward hierarchical clustering to assess whether similar sequences can be grouped into homogeneous groups. To determine the appropriate number of clusters, we reviewed the content of clusters and inspected multiple statistical cut-off criteria, including the Average Silhouette Width (ASW), Hubert's Gamma Somers' D (HGSD), and the Point Biserial Correlation (PBC).[1] Because this cluster analysis has a limit on the number of

[1] We tried two alternative cost specifications. One included the common procedure of setting substitution costs as 2 and indel costs as 1. The other included Partitioning Around Medoids (PAM). Both analyses delivered similar work-family trajectories to the ones we report in the results, with minor differences. We decided to report the current solution because it (a) provided a richer picture, covering all (and more than) the work-family patterns observed in the alternative solutions, (b) yielded better or comparable clustering quality indices and (c)

unique sequences (around 43,000), we aggregated work-family sequences and used unique sequences in the analysis. This is why we also had to limit the age range to 15-49 and combine some employment, partnership, and parenthood states. Finally, since we aimed to provide average life courses for a broader group, we did not calculate work-family trajectories separately for men and women (cf. Komp-Leukkunen, 2019; Schmitz et al., 2023). However, multichannel sequence and cluster analysis is powerful enough to capture gender differences (Aisenbrey & Fasang, 2010). If a cluster exists among only men or only women, it will emerge as a cluster in the analysis based on the combined sample of men and women.[2] The code for reproducing the work-family trajectories is freely available at Open Science Framework (OSF): *https://osf.io/njqpd/*

Trajectory Membership

We examined trajectory membership by gender, educational level, birth cohort, and welfare regime using average marginal effects (AMEs). We used AMEs because they make the interpretation of the results more intuitive. AMEs show the average change in the probability of being observed in a trajectory given the change in an independent variable for each observation in the sample, holding all other predictors constant. We calculated AMEs through Stata's *margins* command after running multinomial logistic regression models. We conducted multinomial logistic regression analyses on the (1) total sample, (2) male sample, and (3) female sample. Gender differences in the role of educational level, birth cohort, and welfare regime were tested by performing a binomial logistic regression analysis for each trajectory and inspecting the significance of the logit of the gender interaction term, as currently there is no agreed-upon way of correctly computing the AMEs of interaction terms in Stata for multinomial models. In all analyses, we took into account that observations within countries are not independent of one another by estimating robust standard errors clustered at the country level.[3]

2.4 Results

Work-Family Trajectories

The statistical cut-off criteria suggested two optimal numbers of clusters. The ASW (0.46) suggested three clusters, but HGSD (0.89) and the PBC (0.73) suggested six clusters (see Figure A1 in the

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demonstrated slightly better predictive validity. We also tried the Dynamic Hamming Distance (DHD) metric. However, due to computer memory issues, we could not obtain a reliable cluster solution.

[2] As a robustness check, we ran the multichannel sequence and cluster analysis separately for men and women. We found similar clusters to the ones reported in the results. The major difference was that the trajectories of non-employment and part-time employment emerged only among women. This corroborates the power of our analytic strategy, suggesting that splitting the multichannel sequence and cluster analysis for men and women does not matter for capturing gender differences. The reason is that we already observe these gender differences in the results, finding that the trajectories of non-employment and part-time employment are female trajectories, with more than 90% of the members being female.

[3] We also estimated two-level multilevel models (i.e., individuals nested within countries). However, we decided to report the models using robust standard errors. We made this decision for two reasons. First, we could not obtain average marginal effects from the multilevel models, making the interpretation of the findings less intuitive. Second, we compared the logit coefficients from both analyses, with the results being similar. In fact, the models with robust standard errors were often more conservative than the multilevel models. The results reporting the logit coefficients from both analyses can be found in the Appendix A.

Appendix A). We adopted the six-cluster solution for two reasons. First, the six-cluster solution was more informative and diverse, providing richer insights into the multiplicity of work-family configurations over the earlier life course. Second, the ASW value for the six-cluster solution (0.40) was above the acceptable level of 0.25.

Figure 2.2 displays the state distribution plots of the six clusters ordered from the highest to lowest prevalence. Work trajectories are shown on the left side and the corresponding family trajectories are on the right. The plots reflect the proportion of individuals in a given work and family state at each age from 15 to 49. The labels we assigned to the clusters are based on their dominant states. Tables A2 and A3 in the Appendix A provide descriptive information on the clusters' social composition.

The first cluster, *full-time worker, partnered parent*, is the largest. It is characterized by continuous full-time employment and having a partner with children. People in this cluster spend on average 28.9 years (SD = 5.9) in full-time employment and 23.4 years (SD = 5.0) in a partnership with children, with full-time employment prevailing after the mid-20s and partnership with parenthood after the 30s.

The other clusters are less prevalent.

The second cluster is a female trajectory, comprising ~95% of women who are a *non-worker, partnered parent*. Non-employment is the dominant work state, with an average of 26.7 (SD = 10.5) years. There is full-time work before age 30, but non-employment takes over after marriage/childbirth.

The third cluster, *full-time worker, childless single/couple*, resembles the first cluster in terms of the work trajectory, as people who follow this trajectory are in full-time employment for an average of 28.9 (SD = 6.2) years. The difference is that people in this cluster do not form a traditional family. They either stay single (M = 18.1, SD = 11.6) or they do not have a child when they have a partner (M = 12.9, SD = 11.5). After age 30, some unpartnered childless people also appear in this cluster.

The fourth cluster, *self-employed, partnered parent*, is a male trajectory, with two-thirds of its members being men. Individuals in this cluster are self-employed for an average of 28.1 (SD = 7.2) years, although we see some full-time and non-employment before the 30s. A nuance in the family trajectory is that having a partner and children concentrates on older ages relative to other clusters.

The fifth cluster is again a female trajectory, largely (~90%) comprising women who are a *part-time worker, partnered parent*. Part-time employment (M = 22.8, SD = 8.8) increases after family formation, but there is full-time employment before age 30 and non-employment until age 40. The family trajectory resembles the second cluster. Nevertheless, in this cluster, the duration of partnership with children is roughly 2 years shorter (M = 20.6, SD = 9.1) than in the second cluster.

The sixth and smallest cluster, *full-time worker, unpartnered parent*, looks like the first and third clusters with respect to the work trajectory, with an average of 28.3 years (SD = 6.5) spent in full-time employment. The distinctive feature of this cluster is the occurrence of a union dissolution event involving children (M = 12.8, SD = 6.0) – an event becoming common after age 30. Unlike the first and third cluster, this cluster has more women (~71%), making it yet another female trajectory.

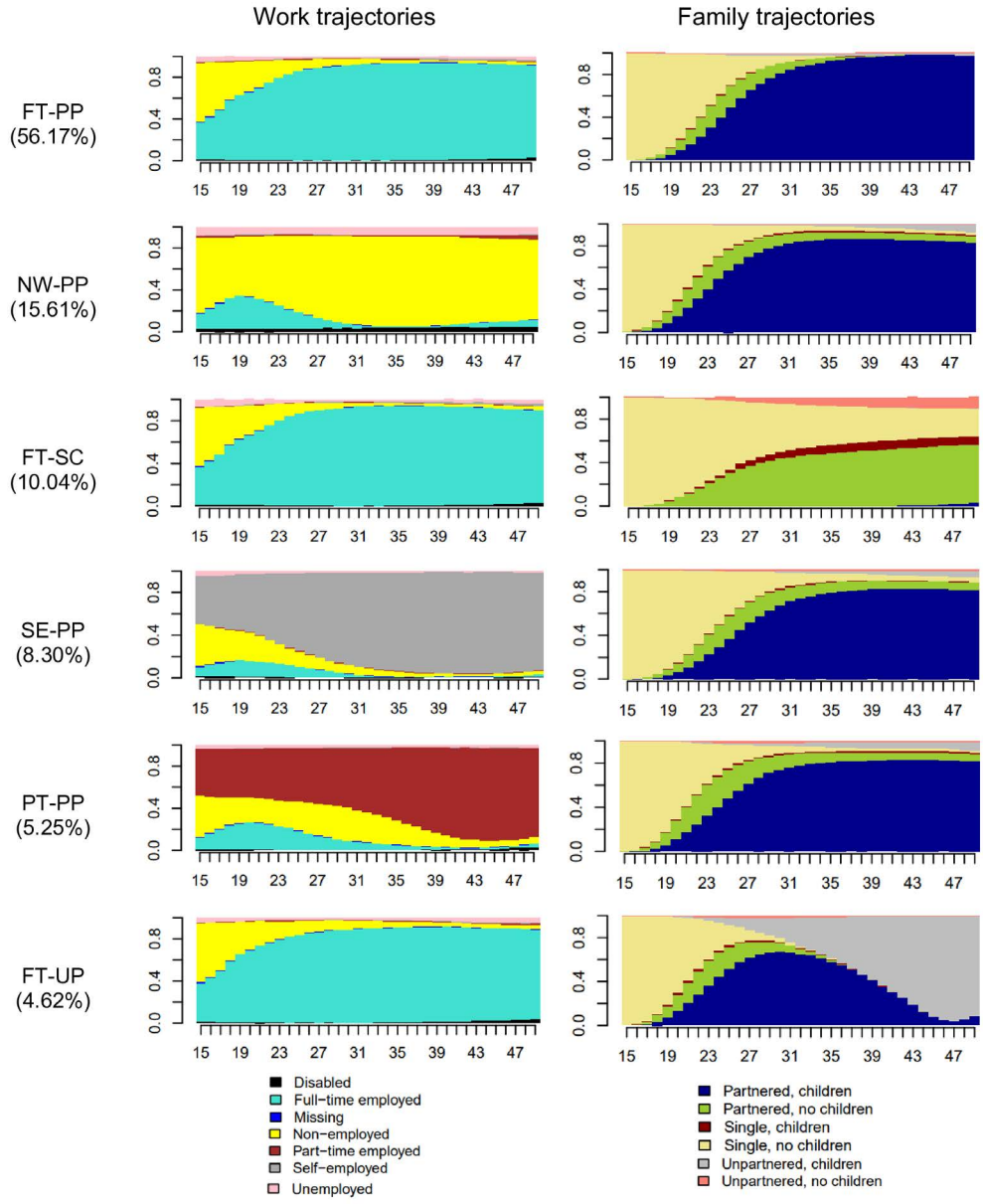
Membership in Work-Family Trajectories: Main Analysis

Figure 2.3 depicts the AMEs of gender, educational level, birth cohort, and welfare regime from the multinomial logistic regression analysis. Table A4 in the Appendix A shows all coefficients.

Gender

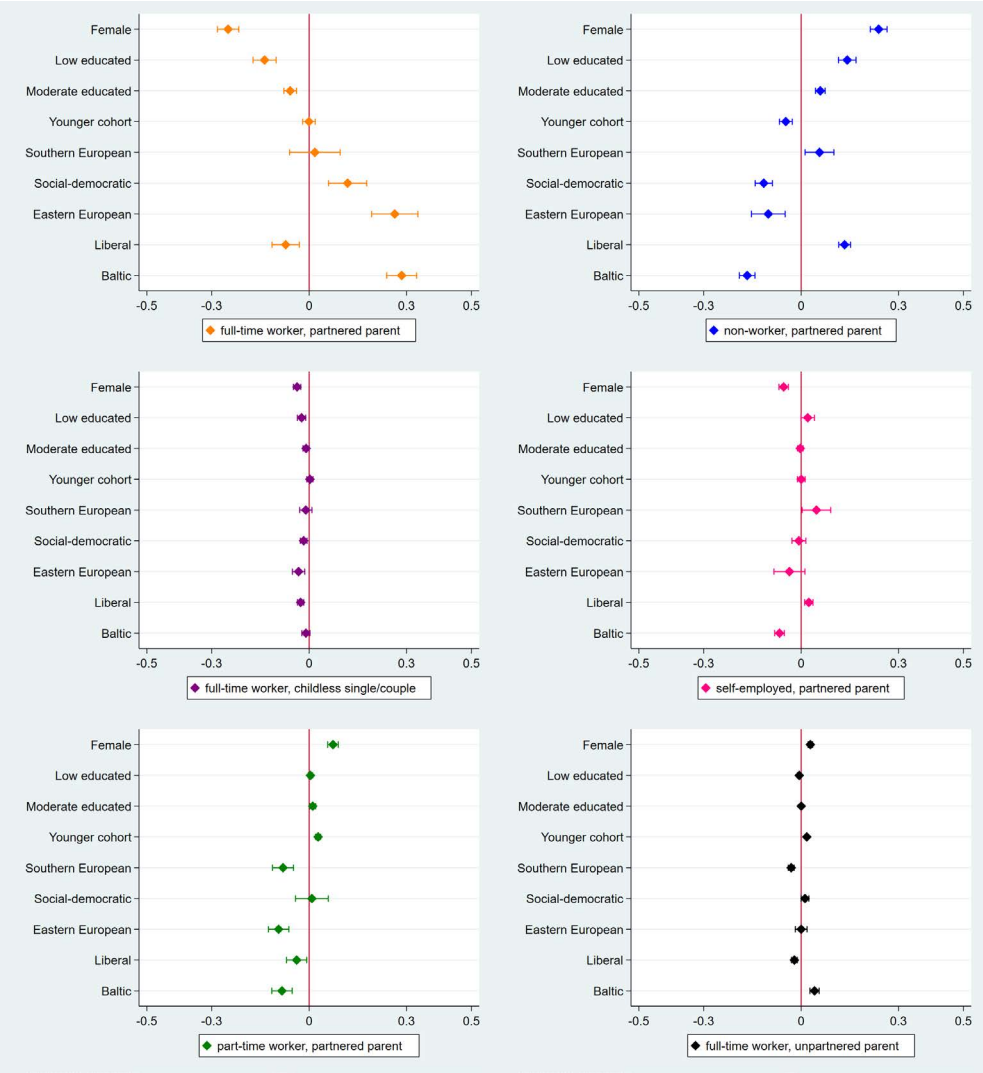
Women are less likely than men to be a full-time worker and self-employed, but more likely to be a non-worker and part-time worker, in conjunction with being a partnered parent. It is worth noting that, relative to men, women display a 25% points lower likelihood to follow the full-time worker, partnered

Figure 2.2 State distribution plots of work-family trajectories from the age of 15 to 49



Note: The x-axis indicates age (15 to 49). The y-axis indicates the proportion (0 to 1) of individuals in a given work and family state. FT-PP: full-time worker, partnered parent. NW-PP: non-worker, partnered parent. FT-SC: full-time worker, single/childless couple. SE-PP: self-employed, partnered parent. PT-PP: part-time worker, partnered parent. FT-UP: full-time worker, unpartnered parent.

Figure 2.3 Average marginal effects for membership in work-family trajectories, with 95% confidence intervals ($N = 77{,}512$)



Note: Reference categories (male, high educated, older cohort, and conservative welfare regime) are not shown in the figure.

parent trajectory, while retaining a 23.9% points higher likelihood to be in the non-worker, partnered parent trajectory. In terms of trajectories that combine full-time work with singlehood, childlessness, or divorce, women exhibit divergent patterns. Relative to men, they are less likely to be in the childless single/couple cluster, yet more likely to be an unpartnered parent (i.e., single mother).

Educational Level

Low and moderate (vs. high) educated persons are less likely to be a partnered parent in full-time, but more likely to be in non-employment over the life course. The likelihood of being in the non-employed trajectory is especially prominent for the low educated (14.1% points more likely). Furthermore, the low educated are less likely to be a full-time worker while being a childless single/couple. However, this does not apply to the moderate educated, who are more likely than the high educated to be a part-time worker and partnered parent. We do not observe any educational differences in having a trajectory of self-employed, partnered parent or full-time worker, unpartnered parent.

Birth Cohort

Younger (vs. older) cohorts are 4.7% points less likely to be a non-worker, partnered parent, yet 2.8% and 1.7% points more likely to be a part-time worker, partnered parent and full-time worker, unpartnered parent, respectively. We find no other cohort differences.

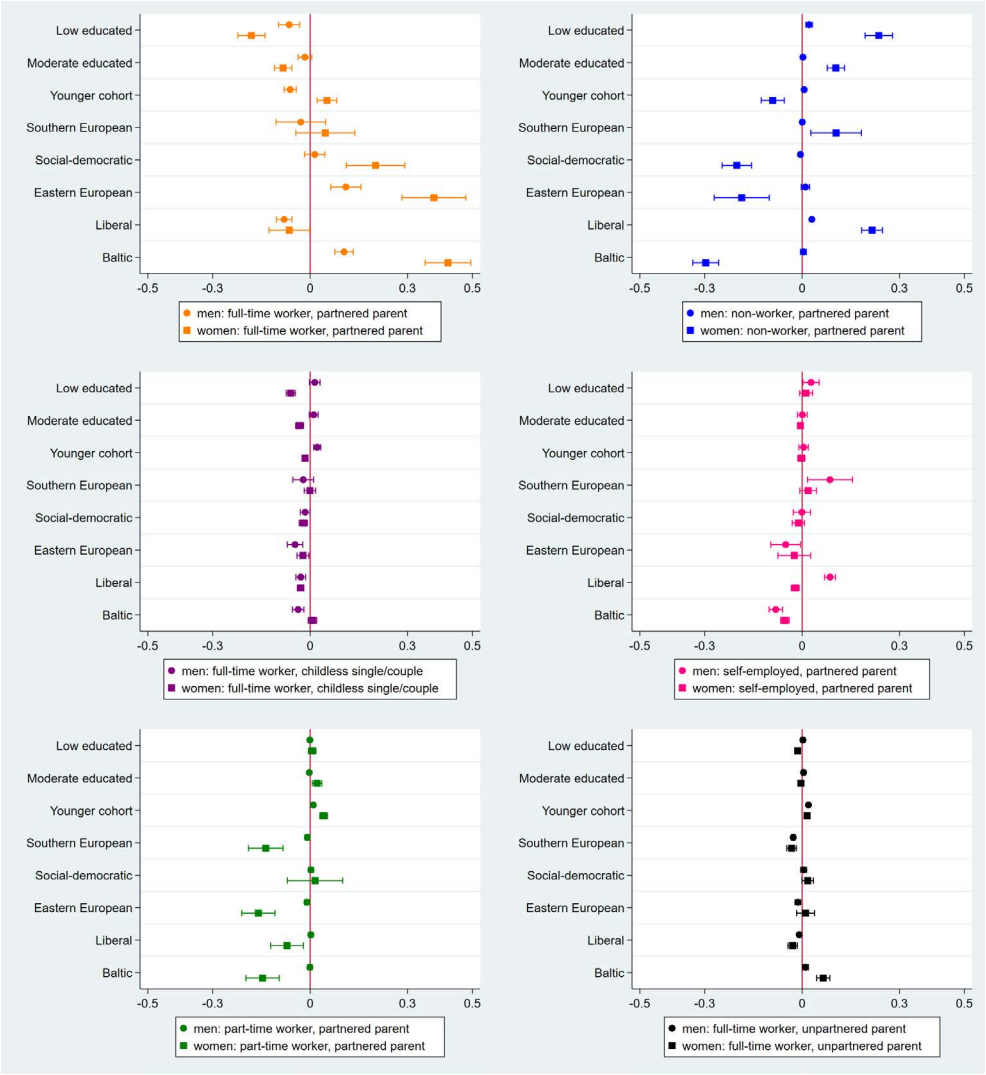
Welfare Regime

Contrasted with respondents from conservative regimes, those from liberal regimes are less likely, whereas those from social-democratic, Eastern European, and Baltic regimes are more likely to follow the trajectory of full-time worker, partnered parent. The estimated coefficients are notably strong for those from Eastern European (26.4% points higher likelihood) and Baltic (28.5% points higher likelihood) regimes. People from Southern European (vs. conservative) regimes are more likely to be a non-worker and self-employed combined with being a partnered parent. However, they are less likely to be a part-time worker, partnered parent and full-time worker, unpartnered parent. Individuals from social-democratic regimes are 11.5% points less likely than those from conservative regimes to be a non-worker, partnered parent. They are also less likely to be a full-time worker, childless single/couple, but more likely to be a full-time worker, unpartnered parent. Compared to persons from conservative regimes, persons from Eastern European regimes are less likely to follow any trajectory other than the most common one, except for those involving self-employment and basically divorce, as the residents of Eastern European and conservative regimes do not differ from each other in these trajectories. People from liberal regimes differ from those from conservative regimes in all trajectories. Specifically, they are more likely to be in non-employment (13.4% points) and self-employment trajectories, but less likely to be in single/childless, part-time worker, and unpartnered parent trajectories. Individuals from Baltic regimes also differ from their peers in conservative regimes in all trajectories, except for the one including singlehood/childlessness. In particular, persons from Baltic regimes are less likely to be in all trajectories deviating from the most common one, except for the unpartnering trajectory, in which they are more likely to be by 4.1% points.

Membership in Work-Family Trajectories: Gender Differences

To explore gendered effects, we ran the multinomial logistic regression models separately for men and women (see Figure 2.4 for the AMEs from these models) and inspected the significance of the logit of the gender interaction terms in binomial logistic regression models (see Table A5 in the Appendix A).

Figure 2.4 Average marginal effects for membership in work-family trajectories among men (n = 34,132) and women (n = 43,380), with 95% confidence intervals



Note: Reference categories (high educated, older cohort, and conservative welfare regime) are not shown in the figure.

Educational Level

In general, the results indicate that the differences between educational levels are in the same direction as the main analysis. Yet, the estimated coefficients are usually larger for women. For example, both men and women with low (vs. high) education are less likely to be in the trajectory of full-time worker, partnered parent, but this effect is considerably larger for women (18.1% points) than for men (6.5%

points). The gender gap is also prominently evident in the trajectory of non-worker, partnered parent: women with low education are 23.6% points more likely to follow this trajectory than their highly educated counterparts, whereas this difference is much smaller among men (2.1% points).

Birth Cohort

Birth cohort differences between genders show a contrasting pattern. First, some coefficients are in opposite directions for men and women. Compared to their older peers, younger cohorts of women are more likely, while younger cohorts of men are less likely to be a full-time worker, partnered parent. Younger male cohorts are also more likely to be a non-worker, partnered parent and full-time worker, childless single/couple than older male cohorts. In contrast, younger female cohorts are less likely to follow these trajectories than older female cohorts. Second, there is no cohort difference between men and women in being a partnered parent with part-time or self-employment. Lastly, there is a slightly larger cohort difference among men in the full-time worker, unpartnered parent trajectory than women.

Welfare Regime

Substantial gender differences emerge across welfare regimes. Both men and women from Eastern European and Baltic (vs. conservative) regimes are more likely to follow the full-time worker, partnered parent trajectory, but these effects are far stronger for women (38.1% points in Eastern European regimes, 42.5% points in Baltic regimes) than for men (11% and 10.5% points, respectively). The gendered role of the welfare regime is particularly salient in the case of non-worker and part-time worker, partnered parents, For instance, women from social-democratic, Eastern European, and Baltic (vs. conservative) regimes are over 20% points less likely to be a non-worker, partnered parent, while women from Southern, Eastern European, and Baltic (vs. conservative) regimes are over 13% points less likely to be a part-time worker, partnered parent. However, these effects do not really exist among their male counterparts. In the self-employed, partnered parent trajectory, men from liberal regimes are more likely, whereas women from the same regimes are less likely. Finally, the full-time worker, unpartnered parent trajectory is more widespread among individuals in Baltic regimes, with a stronger effect for women (6.5% points) than men (1% point).

2.5 Discussion

In this chapter, we aimed to overcome the limited scope and generalizability of previous studies by providing the most comprehensive empirical description of work-family trajectories and their social stratification to date. To this end, we used rich retrospective life history data of almost 80,000 respondents from 28 European countries and observed work-family trajectories from age 15 to 49. This complementary approach, which enabled us to identify common earlier life courses that apply to a wider population, proved fruitful and led to insightful conclusions.

Our first conclusion is that it is possible to distinguish work-family trajectories across a high number of countries and individuals despite their differences. To distinguish work-family trajectories, we applied multichannel sequence and cluster analysis. This is a holistic method to study the theoretical concept of trajectory. This data-driven approach revealed six distinct work-family trajectories over the life course. The most prevalent trajectory in Europe is characterized by continuous full-time employment in the work domain and having a stable relationship with children in the family domain.

The other five differ from the first one in either the work or family domain. Three of them combine part-time, non-, and self-employment trajectories with a nuclear family; the remaining two combine full-time employment with singlehood, childlessness, or divorce trajectories. These findings confirm the added value of our comprehensive approach. We included more states defining the work and family sequences that also covered a larger part of the earlier life course. Therefore, we could capture some trends that prior research using similar data could not identify. For example, Lesnard et al. (2016) and Schwanitz (2017) studied trajectories until age 35 and omitted several states in both the work (e.g., full-time, part-time employment) and family (e.g., divorce, widowhood) sequences. With our design, we uncovered a work-family trajectory that was characterized by union dissolution (mostly divorce) after age 30 while working full-time.

Our second conclusion is that work-family trajectories are strongly socially stratified by gender, educational level, birth cohort, and welfare regime. Only a few previous studies included these factors together, albeit with a smaller sample size and number of countries. Moreover, they looked at work-family trajectories at younger ages only (e.g., age 18-34; Schwanitz, 2017). Our broader approach helped us better evaluate how work-family trajectories are stratified. For example, we found that stratification by gender is widespread and entrenched across societies despite policy efforts to support the dual-earner/dual-carer model. Hinting at the persistence of the male breadwinner and female homemaker norm, women have more restricted access to the full-time work and nuclear family constellation over the earlier life course, but this is changing for younger female cohorts. Women often do not work or work part-time after they get married or have children. When they work full-time, they tend to be divorced or widowed. These work-family constellations at younger ages can hinder their life satisfaction, financial well-being, or career mobility at older ages, widening social inequalities (Damman et al., 2015; Madero-Cabib & Fasang, 2016; Ponomarenko, 2016; Visser et al., 2018). Lower educated persons are alike. Reflecting their limited human capital, the lower educated are underrepresented in the trajectory marked by continuous full-time employment in conjunction with stable marriage and parenthood. Instead, they are non-employed or part-time employed for large parts of their early and midlife while having a traditional family arrangement. Such a pattern may, for instance, force them to postpone retirement, as they would have fewer pension savings, which could increase inequalities in extending working lives (Visser et al., 2016b).

Our third conclusion is that not only work-family trajectories are gendered, but also the relations between these trajectories and educational level, birth cohort, and welfare regime. This is relevant because it helps clarify the gendered nature of stratification by other social attributes, which has been previously acknowledged but not empirically well-examined (Becker, 1981; Bukodi et al., 2012; Sainsbury, 1999). We did so, uncovering divergent effects of education, historical time, and institutional context on men's and women's lives. For instance, compared to lower educated men, lower educated women have an even lower likelihood of following work-family trajectories that involve full-time employment (with and without family formation) in the earlier life course. In contrast, lower educated women (vs. men) display an even higher likelihood of following work trajectories dominated by non-employment and part-time employment, along with a traditional family structure. Thus, education seems to have unequal returns for men and women in the work-family domain (Berrington & Pattaro, 2014; Jalovaara & Fasang, 2015).

The results for birth cohort were counterintuitive at first, but the gendered analysis shed light on them. The most common trajectory of working full-time while having a partner and children did not seem to have become less common over time, and birth cohort was not associated with a family trajectory characterized by being single or a childless couple, which contradicts the life course destandardization hypothesis (Brückner & Mayer, 2005). Yet, by splitting the analysis for men and women, we found support for this hypothesis for men, as they have become less likely to follow the most

common trajectory. Interestingly, we found the exact opposite in women, which can be attributed to their emancipation and increased educational attainment, seemingly rejecting the destandardization hypothesis. We argue that the destandardization hypothesis needs to be refined from a gender perspective so that we can accurately interpret how work-family trajectories change over time for men and women. What was standard in the past for men is not the same as for women, and what can be considered standard for older cohorts of women is partly changing into the standard trajectory of mostly older male cohorts. Without examining birth cohort by gender, we would have missed this discrepancy, drawing misleading conclusions. By going beyond prior work (e.g., Uccheddu et al., 2022), we were able to draw a more accurate picture of gendered life courses. Yet, we did not look at cohort differences by country, which can be done in future research, considering that work and family life courses may have taken divergent pathways across countries over time (e.g., Perelli-Harris & Lyons-Amos, 2016; Van Winkle & Fasang, 2017).

The way welfare regimes shape work-family trajectories is also gendered. We theorized that people from social-democratic, Eastern European, and Baltic regimes would be more likely to follow stable work-family trajectories and less likely to experience turbulent trajectories, due to higher decommodification, lower familialism, and greater defamilialism. The results largely corroborated this theorizing, with clear gender differences. We showed that especially women living in these countries are more likely to follow the trajectory characterized by full-time employment and less likely to follow trajectories dominated by part-time and non-employment, along with marriage and motherhood. This conveys two messages. First, welfare regimes are more relevant for women and guide work-family trajectories in gendered ways because of their gendered policies (Aisenbrey & Fasang, 2017). Second, welfare regimes differ in their equalizing potential (Sainsbury, 1999). Consistent with their gender-equal practices, it seems that social-democratic, Eastern European, and Baltic regimes enable women to combine work and family (Van Winkle & Fasang, 2021). Although this confirms the historical context in which our sample formed their life, it is a question if these results hold for Eastern European women born after the fall of communism, which may have diversified life courses (Lesnard et al., 2016). For instance, we saw that women from Baltic regimes are more likely to be unpartnered with full-time work than women in conservative regimes, which deserves further research and supports our choice to separate Baltic regimes from Eastern European regimes, as this difference was found to be unique to Baltic regimes. Future research is suggested to disentangle the mechanisms that underlie this discrepancy, with a focus on institutional differences between Eastern European countries in the transition from communism to democracy.

The results for Southern European regimes were mixed compared to previous studies. On the one hand, we found that non- and self-employment with a nuclear family are more common in Southern European regimes, supporting past evidence (Torrini, 2005; Ponomarenko, 2016). Extending past evidence, we showed that the prevalence of non-employment in these regimes is driven by women, and self-employment is driven by men. On the other hand, we found that part-time work with a traditional family and full-time work with a dissolved family are less common in Southern European regimes. Although inconsistent with past evidence, these findings make sense because part-time work is less established and union dissolution is less normative in Southern European regimes (Bosch, 2004; Van Winkle, 2018).

Regarding liberal regimes, the results were mostly in line with previous studies. For instance, similar to Komp-Leukkunen (2019) and Schmitz et al. (2023), we also found that partnered parents from liberal regimes are less likely to be in the full-time employment and more likely to be in non-employment and self-employment trajectories, as expected. However, we extended the previous evidence by capturing more nuanced family dynamics. For example, we captured trajectories distinguished by singlehood, childlessness, and union dissolution and showed that people from liberal

regimes are less likely to be in these trajectories, especially if they are female. Overall, we could draw more substantial conclusions about how welfare regimes shape gendered work-family trajectories in the early life course, as we included more welfare regimes covering more countries with larger samples and broader work-family states.

Nevertheless, some limitations should be kept in mind while interpreting our findings. First, we shed light on the social stratification of work-family trajectories; however, we did not illuminate whether people follow a given trajectory willingly or reluctantly. The reason is that SHARELIFE, like most other life surveys, does not provide retrospective information on the voluntariness of work and family transitions. Considering that one's vulnerability may intensify if one takes non-standard paths not because of individual preferences but because they are forced to, future research should investigate the conditions under which people follow certain work-family trajectories voluntarily or involuntarily.

Second, although we captured the most salient events in people's earlier work and family life and covered more work and family states than prior studies, there is still a lot we could not observe. For example, we did not distinguish between marriage and cohabitation or divorce and widowhood. We also did not consider the age and number of children or whether children live in the same household. Moreover, families are becoming increasingly complex because of re-partnering and the presence of stepchildren. Similarly, we could not examine some aspects of work, such as supervisory status and contract type (e.g., temporary or permanent). Including these dimensions could have enriched our grasp of work-family trajectories. However, it would have complicated the multichannel sequence and cluster analysis (due to computer memory issues), and the results would have been harder to interpret. Relatedly, we did not include care duties in the family trajectories because SHARELIFE does not involve care histories. Future research is suggested to include care trajectories, considering that care policies across countries may influence gender inequality in (un)paid work in different ways (Leitner, 2010; Saraceno & Keck, 2011).

Third, we followed the well-known welfare regime approach to characterize cross-national variation in work-family trajectories, which helped us overcome the complexity of analyzing a sizeable number of countries. However, this approach assumes considerable similarities between countries within the same regime. Although we did indeed find considerable similarities between countries within the same regime in the prevalence of the work-family trajectories over the early life course (see Table A3 in the Appendix), we may have underestimated cross-national dissimilarities. Instead of a categorical country-level variable, future studies could use variables on which each country scores a unique value (e.g., an index based on work-family policies) to arrive at more substantial conclusions (cf. Van Winkle, 2020).

Despite these limitations, we contributed to the understanding of how early-to-midlife work-family trajectories look like and to what extent they are socially stratified in Europe. We embraced an encompassing approach that covered more individuals and countries than ever before and included four key predictors. Our findings highlighted pronounced disparities in the type of work-family trajectories people follow based on gender, educational level, birth cohort, and welfare regime. Especially women and the lower educated could be in a disadvantageous position in later life, as they tend to be in work-family trajectories that often create inequalities, such as part-time or non-employment with marriage and parenthood or full-time employment with divorce and single parenthood. Against the background of aging societies, precarious employment, and increasing family complexity, future studies are invited to examine whether these types of work-family trajectories have adverse effects on later-life outcomes, including retirement transitions and post-retirement well-being, and to what extent government policies can protect vulnerable social groups against these risks. To complement our invitation, we make our code producing the trajectory data publicly available, with the hope that it facilitates future research, and we ourselves use the work-family trajectories constructed here in the following chapters.

Chapter 3

Work-Family Trajectories, Welfare State Generosity, and Retirement Voluntariness Across Europe

A slightly different version of this chapter is currently under review at an international journal. Mark Visser and Gerbert Kraaykamp are co-authors of this chapter.

The authors jointly developed the idea and design for the study reported in this chapter. Firat prepared the data, conducted the analysis, and wrote the main part of the manuscript. Visser and Kraaykamp contributed substantially to the manuscript.

The study on which this chapter is based on was presented at the Day of Sociology in Ghent on May 25, 2023, the European Consortium of Sociological Research Annual Conference in Prague on September 18-20, 2023, and the Netspar International Pension Workshop in Leiden on June 19-21, 2024, and received feedback at the Sociology Seminar at Radboud University on May 16, 2023.

Abstract

The study in this chapter takes a comparative life course perspective on retirement voluntariness across Europe. Combining theories on cumulative (dis)advantage and the welfare state, it examines how people's work-family trajectories before age 50 relate to retirement voluntariness from age 50 onward, and whether this is influenced by a country's welfare generosity. To this end, individual life history data from the Survey of Health, Ageing and Retirement in Europe are enriched with time-varying country data on social spending, which are uniquely matched to people's work-family trajectories. The 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 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 features non-employment show an even lower likelihood of voluntary retirement in countries that spend more on 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 predict retirement voluntariness, depending on social spending. These findings suggest that accumulated disadvantages restrict people's agency in navigating their retirement transition. The welfare state either buffers or exacerbates this accumulation, which is determined by people's work-family trajectories.

3.1 Introduction

In today's aging Western world, ever more people retire. Most people do so when they become eligible for a public pension (Mäcken et al., 2022). Yet, not everyone follows this conventional path to retirement. Many workers enter retirement through a different door. Some can retire to enjoy life or spend time with their family (Radl, 2013; Steiber & Kohli, 2017). Others must retire 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; Van Solinge & Henkens, 2007) 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 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; Radl, 2013; Radl & Himmelreicher, 2015; Trentini, 2021). 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 (Stiemke & Hess, 2022). 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 cannot be reduced to the influence of single events. It results from the accumulation of a variety of experiences across multiple domains of a person's complete life course before retirement (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, being at a higher risk of disruptive events. Yet, they might 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). In sum, although singular events certainly matter, life course trajectories consisting of multiple events encapsulate a broader array of information. They inform us not only about the type of events but also the timing, duration, and order of events across different stages of life, enabling a holistic examination of the life course. Therefore, life course trajectories are better suited to explicate who can retire voluntarily and who is vulnerable to facing involuntary retirement.

Nevertheless, only few studies scrutinized the role that life course trajectories play in retirement voluntariness. Visser et al. (2016) showed 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. These studies helped us grasp the mechanisms that push or pull

people into retirement, but they solely examined factors concerning work trajectories. We argue that this approach remains incomplete in explicating inequality in retirement voluntariness, as it neglects that work trajectories are closely intertwined with family trajectories over the life course, which jointly influence retirement decisions (Madero-Cabib et al., 2016). Accordingly, we study joint work-family trajectories that provide a holistic, long-term, and multidimensional approach, better capturing processes of cumulative (dis)advantages over a person's lifespan (Dannefer, 2003). As far as we know, our study in this chapter 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. Both Visser et al. (2016) and Trentini (2021) concentrated on single countries, the Netherlands and Italy, respectively. Although single-country studies have their benefits, they lack the comparative element that is essential for understanding how different systems or contexts shape social inequalities over the life course. To address this limitation, we adopt a comparative lens, where we quantify the characteristics of countries to explain whether and why inequality in retirement voluntariness between people with diverging work-family trajectories varies across countries.

In quantifying this variation, a country characteristic that is particularly likely to matter is the welfare state. As suggested by Leisering (2003), welfare states provide security for individuals who encounter disadvantages in their life course, such as unemployment, disability, and limited access to housing, childcare, or healthcare. This is achieved through the risk management function of social policies, which translate into in-cash and in-kind benefits, including monetary transfers, rights, and services. By providing these benefits, a country's welfare state plays an active role in changing the opportunity structure for individuals, potentially protecting them from disadvantages and offsetting their consequences. 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 power to interrupt the accumulation of disadvantages, thus mitigating social inequalities. However, countries differ in how generous they are in distributing welfare benefits, so the extent to which they mitigate social inequalities likely differs.

In this chapter, we benefit from Leisering's (2003) model of the relationship between the welfare state and the life course 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 risk management and intervention 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 (Kohli, 2007). Research from an institutional life course approach 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 significant 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. In doing so, we capture the cumulative exposure to dynamic social policies across the evolving life course, providing a strict test of the institutional life course approach.

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 types of work-family trajectories from age 15 to 49 from Chapter 2, 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 incorporates a wide range of policy areas across 28 European countries over about four decades, corresponding and matched to the timeline in which the majority of the respondents lived their work-family trajectories.

3.2 Theory and Hypotheses

We study retirement voluntariness from a life course perspective, which argues 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 makes up personal trajectories that differ between individuals depending on the timing, duration, and order of events. Trajectories not only develop across multiple stages but also multiple domains of life, as reflected in Krüger and Levy's (2001) master status hypothesis and Elder's (1985) concept of the differentiated life course, both proposing that life courses are mainly divided between 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 (Han & Mortimer, 2023; Machů et al., 2022), but most prior studies suffer from a lack of coverage (men or women only, a limited amount of countries, a short lifespan, or a narrow range of work and family states). In the previous chapter, we (Firat et al., 2023) addressed these issues and provided the most elaborate measurement of work-family trajectories yet. We 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 chapter, we make use of those six trajectories. 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, like non-employed and divorced, is also possible theoretically, it was not observed in our study. 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 deriving our hypotheses.

In deriving our hypotheses, we adopt the agency within structure model (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 accepts 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). We do so by synthesizing theories on cumulative (dis)advantage and the welfare state. Figure 3.1 depicts our conceptual framework.

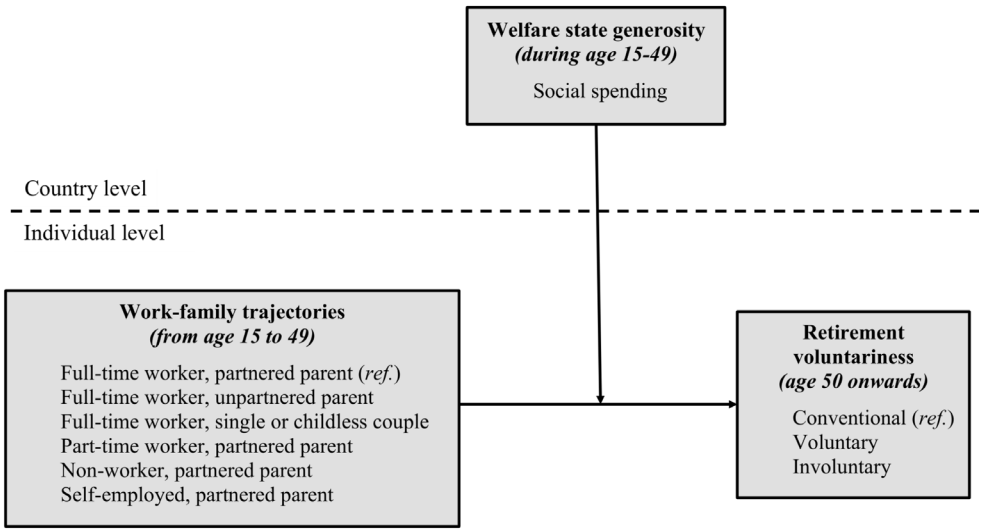
Individual Level: Cumulative (Dis)advantage

The cumulative (dis)advantage mechanism states that (dis)advantages accumulate in a path-dependent way, meaning that earlier (dis)advantages create later (dis)advantages (Dannefer, 2003). For example, a spell of unemployment has scarring effects; that is, 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 found in Chapter 2. 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

Figure 3.1 Conceptual framework



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 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 widowed, 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. Being single can be fulfilling in many respects, and raising children comes with a financial cost, but 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, namely 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 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 fewer pension savings and wealth, while being more susceptible to poorer well-being, although part-time employment might be beneficial for some people's work-life balance, especially if it is a wanted arrangement (Comolli et al., 2021; Halpern-Manners et al., 2015). This implies that being part-time or non-employed for a longer time generally 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 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, despite enjoying higher work autonomy and more flexibility, 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 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

The cumulative (dis)advantage mechanism helps explain why work-family trajectories are related to retirement voluntariness. Yet, it is a micro-level explanation, while people live the experiences of work,

family, and retirement within the institutional structures of governments. Governments institutionalize the life course of individuals through the implementation of social policies (Kohli, 2007). Since social policies differ between countries and within countries over time, persons with similar work-family trajectories may also differ in their reasons for retirement, depending on the country and specific time they developed this work-family trajectory. Therefore, we will argue that cross-national differences in social policies have implications for the accumulation of (dis)advantages in work-family trajectories and, as a result, for inequality in retirement voluntariness.

To explain how, we turn to Leisering's (2003) model of the relationship between the welfare state and the life course. According to this model, there are three core fields of social policy, consisting of education, old-age pensions, and systems of risk management, which cover social assistance and social security. These fields of social policy shape the life course through the processes of differentiation and integration, while there is also a hidden, normative process going on. Education and old-age pensions differentiate the life course into the stages of youth, adulthood, and old age. The integration between these stages is established via systems of risk management, such as contributory unemployment or sickness insurances and non-contributory childcare or housing programs. These systems help individuals have continuity in their life course by setting a bridge between transitions and discontinuities. This continuity is achieved through the provision of welfare benefits that ensure a certain standard of living for citizens.

We suggest that 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. 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. Even if one is not directly confronted with a disadvantage, the availability of generous welfare benefits is still helpful indirectly. For example, illness may be avoided thanks to good healthcare with easier access to preventive measures, old-age poverty can be tackled by sufficient state pensions, or the (opportunity) costs of parenting can be minimized through the provision of formal childcare. In sum, people can break a cycle of cumulative disadvantage or avoid it altogether 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. However, 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. This means that self-employed persons sometimes must deplete their own resources to manage adversities, whereas employees are often protected to a larger extent. Therefore, the risk management function of social policies 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 these expectations turn out differently for men and women. As suggested by Leisering (2003), there might be an implicit normative process in the relation between the welfare state and the life course that reinforces gender differences. For example, from the life course research, we know that women are overrepresented in trajectories characterized by part-time and non-employment. This would imply that the findings regarding these trajectories apply to women, but 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 remained unclear. Therefore, although theorizing about these gender differences falls beyond the scope of this chapter, we undertake an explorative analysis of gender differences.

3.3 Methods

To examine the link between work-family trajectories and retirement voluntariness, with a focus on the moderating role of welfare state generosity, we had to account for relationships at various time points and levels of analysis. Specifically, we needed to consider individuals' past lives, their current situations, and countries' institutional arrangements during the past lives of individuals. Given the complexity of these relationships, we made several methodological decisions. In the following sections, we first introduce our data and describe how we identified our sample (Data). Then, in the Measurement, we clarify our conceptualization of retirement and operationalization of retirement voluntariness (Dependent Variables). This is followed by the assessment of work-family trajectories of individuals (Independent Variables), social spending of countries (Moderator Variables), and Control Variables. Finally, we outline the way we handled the data to test our hypotheses (Analysis).

Data

To start with the data, we drew information on the past work-family trajectories and current retirement characteristics of individuals from SHARE (Börsch-Supan et al., 2013). SHARE is a large research infrastructure that collects representative data through probabilistic sampling and computer-aided face-to-face interviews with adults aged 50 and older. It provides both retrospective and prospective data across European countries, making it uniquely suited for a cross-national study of the association between work-family trajectories and retirement voluntariness.

The retrospective data in SHARE allow for reconstructions of individuals' employment, partnership, and parenthood experiences throughout each year of their lives, enabling the creation of holistic work-family trajectories before retirement. The prospective data capture respondents' current circumstances, including retirement status and reasons behind retirement, which are useful for determining whether one's retirement was conventional, voluntary, or involuntary. So far, SHARE has conducted nine waves of data collection: one focused on retrospective data (wave 3), seven on prospective data (waves 1, 2, 4, 5, 6, 8, and 9), and one (wave 7) that integrates both retrospective and prospective data.

For the study in this chapter, we required both types of data. The information needed to construct work-family trajectories was available only in the retrospective surveys (waves 3 or 7). Thus, we began by selecting individuals who completed one of these retrospective surveys and whose pre-retirement work-family trajectory, covering ages 15 to 49, had been reconstructed in Chapter 2. To link these trajectories to retirement voluntariness, we then identified those who had also participated in at least one of the prospective surveys (waves 1, 2, 4, 5, 6, 7, 8, or 9), where retirement details were gathered. From these prospective surveys, we selected only respondents who were retired. Given that the work-family trajectories covered the ages of 15 to 49, we restricted the sample to those who had retired at the age of 50+ to ensure a clear temporal order between trajectories and retirement.

Applying these criteria resulted in a sample of 55,491 individuals who had work-family trajectory data from age 15 to 49 and retirement voluntariness data from age 50 to 90. From this sample, we excluded those who retired after age 70 (1.38%), as this age marks the upper limit for pension eligibility in the countries under study and represents a selective group of people who delayed retirement beyond the typical age range. This exclusion also helped us minimize the time gap between the measurement of work-family trajectories and retirement. The average age of retirement in our sample was 60, meaning that there was a gap of approximately ten years between respondents' work-family trajectories and retirement. Finally, we excluded respondents with missing data on retirement voluntariness (10.87%), which was missing due to non-response, not knowing the answer, or refusing to answer. After these adjustments, our final sample comprised 48,775 people from 28 European countries.

Measurement

Dependent Variables

In this section, we illustrate how we defined retirement and measured retirement voluntariness while also disclosing the timing component of retirement voluntariness. We defined retirement as the exit from the workforce and considered a person retired when that person self-reported retirement to be their current job situation. We adopted this definition because the measurement of retirement voluntariness in SHARE's prospective survey was dependent on this self-report. In the survey, respondents were first asked about their current job situation, and if their response was *retired*, they received a follow-up question that asked why they retired, with ten reasons listed. This question was asked in the wave in which people reported their current job situation as retired for the first time, meaning that the provided reasons concerned the first transition to retirement. Consistent with previous research that implemented an indirect approach to measure retirement voluntariness based on the reasons for retiring (Mäcken et al., 2022; Trentini, 2021), we used these ten reasons to distinguish between conventional, voluntary, and involuntary retirement, as shown in Table 3.1.

Respondents could select as many reasons as they wanted, but most respondents chose only one of the ten reasons. Nevertheless, some of them (8.92%) provided multiple reasons. When multiple reasons were provided, we embraced the approach of other researchers (Hyde & Dingemans, 2017; Radl, 2013) and prioritized involuntary reasons the most. This is because if people mentioned negative reasons alongside other reasons, other reasons might be post-hoc justifications to rationalize the forced exit from the workforce. We prioritized the conventional reason the least, as retiring for voluntary reasons reflects a more active choice and agentic transition than reaching public pension eligibility.

Additionally, following Radl (2013) and Radl and Himmelreicher (2015), we regarded those whose current job situation was permanently sick/disabled or unemployed as retired. However, we did this only if they were in that situation for at least two subsequent years until the last observation. We coded these people as involuntarily-retired because they were outside of the labor market in an

Table 3.1 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

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

unwanted situation, and they were so already for a long while. In our sample, this was the case for 1.17% of respondents. Of these, the sick/disabled (0.75%) were incapacitated for, on average, almost eight years, and the unemployed (0.42%) were jobless for almost seven years before the last observation. This suggests that they will not return to employment and can be seen as retirees.

After determining the voluntariness of each person's retirement as conventional, voluntary, or involuntary, we created two dependent variables out of these three categories. A single dependent variable with three categories is more intuitive, but 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 needed to get reliable estimates in cross-level interactions (Heisig & Schaeffer, 2019). It was still possible to include random coefficients in models with two dependent variables. This is why we proceeded 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, meaning that conventional retirement was the reference category. 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.

In terms of retirement timing, conventional and voluntary retirees were similar. Most conventional and voluntary retirees retired between ages 60-65, with a mean of 61. Most involuntary retirees, though, retired before 61. On average, involuntary retirees retired about 2.5 years earlier than both conventional and involuntary retirees, supporting the idea that they leave the workforce prematurely.

Independent Variables

As mentioned before, we here use six types of work-family trajectories identified in Chapter 2. The details concerning the procedure for constructing these trajectories are available in the measurement and analysis sections of Chapter 2. A description of the content of each trajectory can be found in Table 3.2. We treated the full-time employed partnered parent trajectory as the reference category because it was the most common trajectory, also representing the most resource-rich trajectory.

Table 3.2 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 two 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 two years.

Sources: Firat et al. (2023) – Chapter 2 (based on SHARE waves 3 and 7).

Moderator Variables

In this section, we elaborate on the process of assessing welfare state generosity and linking it to the formative years of an individual's work-family trajectory. 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. Yet, 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 high, ranging from $r = 0.81$ to $r = 0.94$. 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, following Leisering's (2003) proposal to study the welfare state as a whole, we used a 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 affects an individual's life at the time and in the country they formed their life course, 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 (0.01%). For others, we had a partial match of one to 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. 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 B, where higher scores show higher welfare state generosity.

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 ISCED 1997, which distinguishes between seven levels. We condensed these levels into three groups to identify low- (levels 0-2), moderate- (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 link 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 3.3 shows descriptive statistics of all variables.

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.

Table 3.3 Descriptive statistics (N = 48,775)

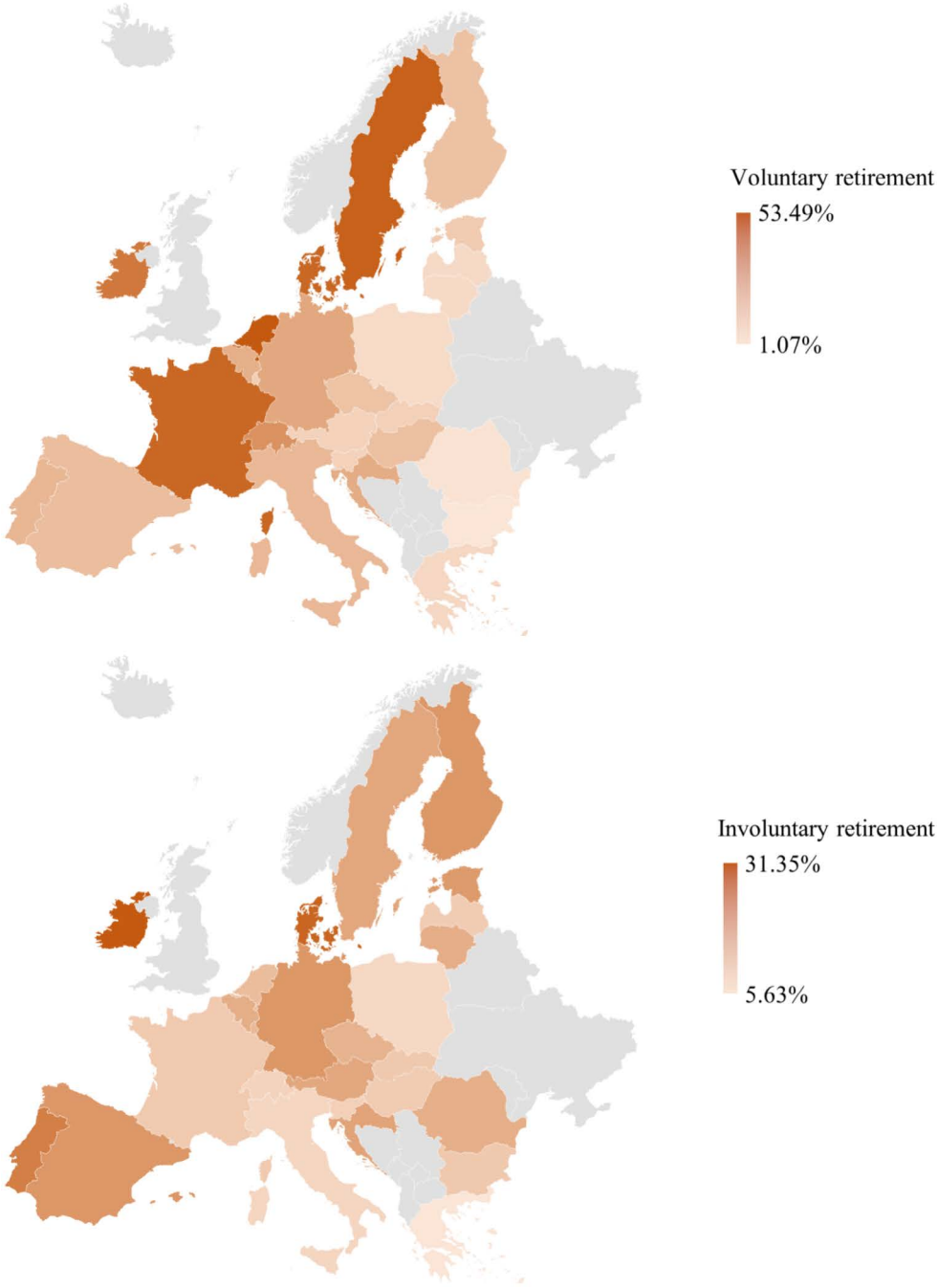
Individual level	%		
Retirement voluntariness			
Conventional	64.43		
Voluntary	20.83		
Involuntary	14.74		
Work-family trajectories			
Full-time worker, partnered parent	61.61		
Full-time worker, unpartnered parent	4.79		
Full-time worker, single or childless couple	10.56		
Part-time worker, partnered 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

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

3.4 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 3.2, 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.

Figure 3.2 Retirement voluntariness across European countries



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 suggest that retirement voluntariness varies cross-nationally.

Multilevel models confirmed that retirement voluntariness varies cross-nationally, as the country variance components were statistically significant. The intraclass correlation was 0.21 for voluntary (versus conventional) retirement and 0.09 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 3.4 and 3.5. Model 1 revealed that work-family trajectories indeed 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.

These results suggest that deviating from full-time employment and a traditional family structure 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 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

Table 3.4 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

Table 3.4 (continued)

	Model 1			Model 2			Model 3		
	B		*SE*	*B*		*SE*	*B*		*SE*
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

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

Significance levels: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

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

Table 3.5 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

Table 3.5 (continued)

	Model 1		Model 2			Model 3		
	B	*SE*	*B*		*SE*	*B*		*SE*
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

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

Significance levels: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

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

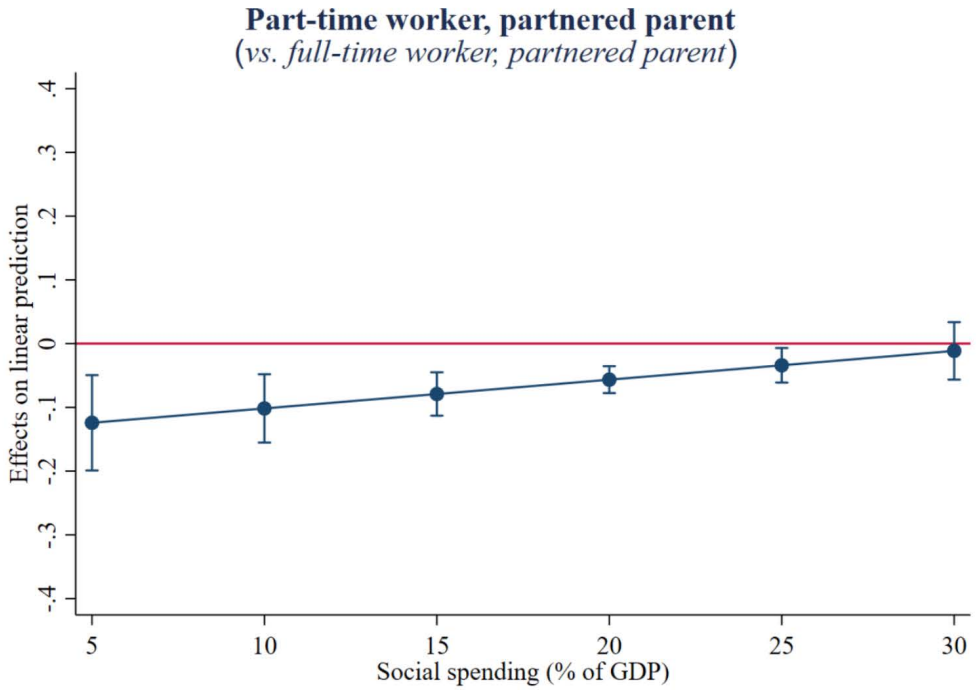
education, whether low or moderate, were less likely to retire voluntarily and more likely to retire involuntarily, with greater disparities observed for the low-educated (~6% points). As for birth cohort differences, all three groups who were born after 1940 had higher likelihoods of voluntary and involuntary 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.

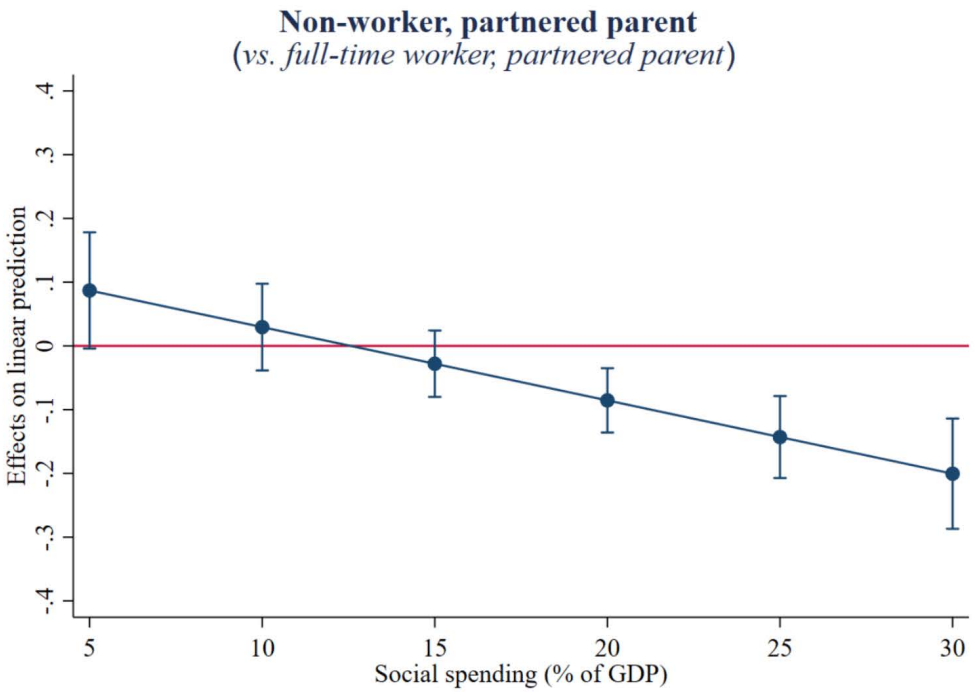
Model 2 included random coefficients for the work-family trajectories. These were statistically significant for virtually all work-family trajectories, with country characteristics being plausible candidates to explain some of the variation between countries in the coefficients. Random coefficients for 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 3.3. 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.

The plot at the bottom of Figure 3.3 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 and 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

Figure 3.3 Average marginal effects of work-family trajectories on voluntary versus conventional retirement by welfare state generosity, with 95% confidence intervals





widened as a welfare state becomes more generous. Although this is counterintuitive, it is plausible 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 found no interaction between the social spending generosity and any of the work-family trajectories. Hence, we reject H2b, though it was anticipated that the generosity of the welfare state would not matter much for self-employed persons, as they usually 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 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/childless women with full-time work were more likely to retire voluntarily than full-time working moms, but no such discrepancy was found for men. For men, the single or childless were more prone to involuntary retirement than those with a stable relationship involving children, despite both working full-time over the life course. Yet, 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. Still, part-time working married mothers did not differ from full-time working married mothers in 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 observed no interaction regarding involuntary retirement in the entire sample or the male sample, we obtained 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.

Overall, these analyses demonstrated 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 B.

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 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.

Next to these checks, we also tested our models on the involuntary versus voluntary contrast for a complete comparison between all types of retirement voluntariness. Again, we ran these models in the entire sample and 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 B.

3.5 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 also unknown whether the impact of work-family trajectories differs across countries by their welfare provisions. This chapter addressed these 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 studied single life events in a specific life stage or multiple life events in a single life domain, we studied entire work-family trajectories from age 15 to 49. This holistic approach proved fruitful. We conclude 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 be that the self-employed keep working until the public pension eligibility not because they have the resources and agency to do so, but simply because they cannot afford to retire

before they become eligible for a public pension. Similarly, the non-employed 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 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 well-being (Comolli et al., 2021). For men in full-time work, 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, while men in similar situations were prone to involuntary retirement. This implies that single or childless men miss the potential benefits of marriage or fatherhood for their income or health (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 than full-timers. Married mothers with a similar work history, though, did not differ from married mothers in full-time employment. This reflects the male breadwinner-female homemaker norm, which prioritizes men's workforce participation over women's, with divergent effects 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 considering certain limitations. One limitation concerns our measurement of retirement voluntariness. We created a broad indicator of retirement voluntariness distinguishing between conventional, voluntary, and involuntary retirement (Radl, 2014). Yet, like previous studies, we used an indirect measure of voluntariness based on retirement reasons, and we do not know how respondents perceived their retirement transition. 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 and perceptions of voluntariness to scrutinize the extent to which they overlap or contradict (Ebbinghaus & 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. Post-retirement work also deserves attention in this regard, as some individuals may engage in this type of employment to regain autonomy after an involuntary retirement to supplement pension income (Dingemans et al., 2017), thus complicating the distinction between voluntary and involuntary retirement.

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.

Chapter 4

The Role of Work-Family Trajectories, Finances, Health, and Welfare State Generosity in Bridge Employment Across Europe

A slightly different version of this chapter has been published open access as:

Firat, M., Visser, M., & Kraaykamp, G. (2025). What drives people to work in retirement? The role of work-family trajectories, finances, health, and welfare state generosity in bridge employment across Europe. *Work, Aging and Retirement*. Advance online publication. https://doi.org/10.1093/workar/waaf005

The authors jointly developed the idea and design for the study reported in this chapter. Firat prepared the data, conducted the analysis, and wrote the main part of the manuscript. Visser and Kraaykamp contributed substantially to the manuscript.

The study on which this chapter is based on was presented at the Day of Sociology in Nijmegen on June 17, 2024, and received feedback at the Sociology Seminar at Radboud University on March 14, 2024.

Abstract

Bridge employment – retirees performing paid work before permanently retiring – is becoming increasingly common. However, it remains unclear how bridge employment is shaped by people's work-family trajectories across different welfare states. Using the Survey of Health, Ageing and Retirement in Europe and estimating three-level linear probability models, results show that – compared to continuously full-time employed persons in nuclear families – those who remain single or childless are more likely to have a bridge job out of financial comfort and are less likely to be bridge-employed because of poorer health. Poorer health also prevented mostly non-employed partnered parents from bridge employment, while financial hardship is a barrier for people who experienced divorce and those who were predominantly part-time, non-, or self-employed. Finances generally suppressed the relationship between work-family trajectories and bridge employment, reflecting the importance of alternative mechanisms, such as social and psychological motivations. Further, the association between people's finances and bridge employment is weaker if governments spend more on pensions, but only among people aged 65+. This hints at generous state pensions being able to close the gap in bridge employment between people with different work-family trajectories. Higher healthcare expenditures increase bridge employment, especially for healthier retirees. Generally, our findings support theories on cumulative (dis)advantage and the welfare state, indicating that work-family trajectories partly determine bridge employment through finances and health. They also demonstrate that the role of finances and health is conditional on social spending, highlighting the importance of pension and health policies for older adults.

4.1 Introduction

When thinking of retirement, it is common to imagine a stage of life that is free from work. Retirement is often seen as a time to enjoy the freedom of pursuing interests without having work obligations. However, with ongoing pension reforms, especially in the rapidly aging Western world, this traditional view of retirement should be nuanced (Lassen & Vrangbæk, 2021). Nowadays, many people perform paid work in retirement, a phenomenon called bridge employment.

Bridge employment is a distinct concept in the retirement literature (Wang & Huang, 2024). It is a hybrid situation of work and retirement, generally defined as having gainful employment while receiving any type of pension (Beehr & Bennett, 2015). It is usually seen as a temporary and transitional phase between active employment and permanent retirement, where individuals engage in reduced or modified work arrangements, either due to partial retirement options, changing health needs, or shifting financial demands (Galkutė & Herrera, 2020). As such, bridge employment reflects a unique blend of continuity and change in later life, shedding light on the diverse ways older adults adjust to retirement.

Research has shown that typically social groups in advantageous positions engage in bridge jobs, including retirees who are male, younger, and higher educated (Sullivan & Al Ariss, 2019). What seems to matter most for bridge employment is the financial and health situation of retirees (Birkett et al., 2017). While some studies found no or even a negative effect of financial resources, most of the literature suggests that people with more finances are more likely to work in retirement (Platts & Glaser, 2025). Research on the role that health plays seems more consistent, with better health predicting a higher likelihood of having a bridge job (Carlstedt et al., 2018). This implies that bridge employment is more common among those who tend to earn higher salaries, accumulate wealth, and preserve physical or mental fitness. However, individuals in more disadvantageous positions might also take bridge jobs. Some retirees face financial hardship because of lower pension entitlements or insufficient household income as a result of interrupted work careers and family instabilities over the life course (Möhring, 2021). Consequently, they may return to work or stay employed after retirement (Kolev & Pascal, 2002). Other retirees, particularly those who left the workforce because of illness or disability, may struggle to re-enter employment due to ongoing health issues that accumulated over the life course (Dingemans et al., 2016). This means that although bridge employment is well-predicted by better finances and good health, our understanding of bridge employment remains incomplete without considering how people's previous life courses shaped their current financial and health situation.

We therefore propose a life course perspective to study this phenomenon. The life course perspective argues that life course transitions, particularly complex ones like bridge employment, are best understood when studied as part of a person's complete trajectory (Elder et al., 2003). This is because such transitions are the outcome of accumulating experiences in earlier life, rather than of single and isolated events (Dannefer, 2003). As such, the life course perspective emphasizes a longitudinal approach while accounting for the interdependence between trajectories across different life spheres, especially the domains of work and family (Krüger & Levy, 2001). Work and family are deeply intertwined domains, connected through social expectations, economic dependencies, and time commitments (Han & Mortimer, 2023). Their interplay influences opportunities and constraints over the life course, making their joint examination useful for explaining later-life outcomes (Machů et al., 2022). Given this interplay, work-family trajectories provide a holistic lens to capture how barriers and facilitators of bridge employment, including finances and health, are shaped by people's life course trajectories before bridge employment (Piccarreta & Studer, 2019).

Only a few studies took a life course perspective on bridge employment, yet focusing solely on work trajectories. Burkert and Hochfellner (2017) found that German retirees with more unemployment and sickness over their careers were more likely to work in retirement. Brydsten and colleagues (2025) showed that Swedish workers with unstable trajectories characterized by frequent transitions between low-paying jobs had a higher likelihood of working in retirement. Across 13 European countries, Dingemans and Möhring (2019) demonstrated that people who spent more time in part-time and self-employment across their lives were more likely to enter bridge employment. In contrast, those with a history of mainly full-time work were less inclined to do so. Going beyond work trajectories, Madero-Cabib and Biehl (2021) examined work-family trajectories, albeit in a small sample from a single city in Chile, limiting the external validity. Their findings showed that full-time working divorced parents and part-time working married parents were more often bridge-employed. However, parents who were not employed, whether married or divorced, had a lower chance of being bridge-employed.

These prior studies highlight that individuals with disadvantageous or non-standard trajectories, who are more susceptible to financial strain and poor health (Comolli et al., 2021), are more likely to work in retirement. This challenges the finding that bridge employment is exclusively for those in advantageous positions, pointing at the possibility that people in disadvantageous positions might also take bridge jobs. Yet, these studies did not properly address this possibility for three reasons. First, they primarily considered work trajectories, not accounting for the interplay with family trajectories. This overlooks critical factors, such as marriage stability, union dissolution, and parenthood, which can reinforce or offset the advantages and disadvantages of work trajectories. Second, they assessed the relationship between life course trajectories and bridge employment without scrutinizing the role of finances and health as potential underlying mechanisms explaining this relationship. Third, these studies were conducted in single-country contexts. The one study comparing multiple countries did so without incorporating country-level characteristics that can mitigate or exacerbate financial and health disparities in bridge employment. Hence, our understanding of what drives people to work in retirement remains incomplete.

In this chapter, we aim to provide a more complete understanding with three major contributions. First, using nationally representative large samples, we examine work-family trajectories to present more holistic and generalizable findings on whether individuals with unique biographies differ in entering bridge employment. Our study aims to capture how work-family trajectories collectively inform the retirement transition, as opposed to pinpointing a specific factor within each trajectory, such as whether it is a divorce or unemployment episode that drives bridge employment. Second, we decompose the relationship between work-family trajectories and bridge employment, focusing on a person's finances and health. By considering these factors, we disentangle how bridge employment is the result of accumulated advantages and disadvantages over the life course. Third, we theorize and empirically test how the country context may offset the accumulation of (dis)advantages resulting from work-family trajectories and re-shape bridge employment decisions. Specifically, we examine a country's pension and healthcare expenditures, which are two pillars of the welfare state that influence older adults' financial and health prospects (Gallet & Doucouliagos, 2017; Kuitto et al., 2023).

In making these contributions, we exploit rich and detailed longitudinal data at both the individual and country level to answer three research questions. First, we establish the total effects of work-family trajectories, asking: *To what extent are work-family trajectories associated with bridge employment?* Second, we examine the indirect effects through finances and health: *To what extent do finances and health explain the relationship between work-family trajectories and bridge employment?* Third and finally, we study cross-level interaction effects: *To what extent does the role of finances and health in bridge employment depend on the generosity of a county's pension and healthcare system?* We also explore empirically whether the answers to these questions differ for men and women.

We draw individual-level data from the Survey of Health, Ageing and Retirement in Europe (SHARE) and use six types of work-family trajectories from age 15 to 49, previously identified in Chapter 2, where we provide the most elaborate cross-national measurement of work-family trajectories to date. For finances and health from age 50+, we include people's ability to make ends meet and the perception of their general health, while assessing bridge employment by any combination of paid work and pension income. To answer the third research question, we integrate country-level time-series data from Eurostat, involving expenditures on pensions and healthcare across 28 countries over two decades, corresponding and matching to the period in which our sample retired.

4.2 Theory and Hypotheses

The life course perspective frames human life as an age-graded process that unfolds continuously and where transitions from one state to another do not happen in a vacuum. Transitions follow previous transitions and have implications for experiences in later life stages. This series of experiences spanning various phases, such as from early adulthood to midlife, shape the life course trajectories of individuals, which differ from one another based on when, how long, and in what order events occur. Trajectories develop not just over various phases, but also across different spheres of life, as seen in Krüger and Levy's (2001) master status hypothesis and Elder's (1985) idea of the differentiated life course, both of which suggest that life courses primarily intersect through work and family roles.

Researchers have increasingly examined work-family trajectories over the earlier life course and their implications for later life events, including retirement. This has sparked an extensive inquiry into describing typical work-family trajectories, as summarized in recent reviews (Han & Mortimer, 2023; Machů et al., 2022). However, prior studies often suffered from a limited scope, such as focusing on men or women, a restricted number of countries, short periods of the lifespan, or narrow measurements of work and family states. Tackling these gaps, we (Firat et al., 2023) conducted a large study in Chapter 2, using the SHARE data and covering about 80,000 people in 28 European countries. As detailed in Table 4.1, we identified six common trajectories spanning ages 15 to 49, which we consider in this chapter.

The most common trajectory we identified was (1) an uninterrupted career of full-time employment and a lifelong marriage including children. The other trajectories deviated from this customary one in the work and/or family domain. Those differing in the family domain were again characterized by continuous full-time employment, but featured a (2) divorce and a long-term history of (3) singlehood or childlessness. Those differing in the work domain involved predominantly (4) part-time employment, (5) non-employment, and (6) self-employment, all alongside stable relationships and having children. While a seventh trajectory that brings together non-traditional forms of work and family (e.g., divorced and part-time employed over the life course) is theoretically possible, it was not found to be a common configuration in our study. This configuration is also mentioned rarely in the literature (Han & Mortimer, 2023; Machů et al., 2022), so we do not consider it henceforth.

In deriving our hypotheses, we adopt an institutional life course approach (Mayer, 2005) by combining the cumulative (dis)advantage theory (Dannefer, 2003) with theories on the welfare state (Esping-Andersen, 1999). This approach helps us elucidate bridge employment at the nexus of individuals' work-family trajectories, resources, and countries' institutional characteristics.

Individual Level: Cumulative (Dis)advantage

Cumulative (dis)advantage theory posits that advantages in earlier life lead to advantages in later life, and so do disadvantages (Dannefer, 2003). Called path dependency, this process operates through

Table 4.1 Six types of work-family trajectories from age 15 to 49

Label	Description	Gender
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.	Female: 45% Male: 55%
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.	Female: 71% Male: 29%
Full-time worker, single/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.	Female: 46% Male: 54%
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.	Female: 89% Male: 11%
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.	Female: 95% Male: 5%
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.	Female: 40% Male: 60%

Source: Firat et al. (2023) – Chapter 2 (based on SHARE waves 3 and 7)

resources gained from lived experiences. While some people experience favorable events, others face adversities. Differences between people intensify over time, producing disparities in possessing resources to exert agency in future transitions. Applying this theory to the relationship between work-family trajectories and bridge employment, we argue that distinct types of work-family trajectories confer varying levels of finances and health, which in turn shape bridge employment decisions.

As mentioned, we here consider six types of work-family trajectories from Chapter 2. First, the trajectory that combines continuous full-time employment with a stable partnership involving children (a trajectory more common among men) may pose challenges, such as a sense of conflict between work and family roles and stress associated with work and family obligations. Nevertheless, it is fairly advantageous when it comes to resource accumulation. Consistent full-time employment generally yields decent earnings and regular pension contributions, ensuring greater pension benefits,

household income, and wealth in the future, particularly if couples are dual-earners (Halpern-Manners et al., 2015). Concerning health, this trajectory usually promotes well-being, since people in this trajectory often work under more favorable conditions and sustain multiple social roles as workers, partners, and parents, which protect against (mental) illness (Lacey et al., 2016; Machů et al., 2022).

Second, full-time workers who are divorced and do not repartner for most of their earlier lives, which is a pattern predominantly seen among women, meet constraints in later life despite their advantageous work trajectory characterized by strong labor market attachment. When people separate, they normally divide finances, possibly endure social stigma, and sometimes pursue unhealthy habits, including excessive alcohol consumption and smoking (Barban, 2013). Consequently, they perceive reductions in household income and wealth, feel financial strain, and become more susceptible to illnesses (Barban, 2013; Kapelle & Baxter, 2021; Möhring, 2021).

Third, individuals – usually men – experiencing a trajectory of working full-time while being single or childless can similarly enjoy advantages in their professional lives. Yet, financially, being a single wage-earner could pose challenges in securing mortgages, and childless people might not benefit from tax credits and allowances available to families with children (Xiao & Yao, 2020). These circumstances restrict their ability to accumulate wealth compared to full-time workers in traditional families, although they may have greater comfort in their spending and savings, as they do not incur the costs associated with raising children. Regarding health, studies suggest that single or childless persons may be more prone to certain illnesses, potentially because they have less access to social contacts, support, and role attainment acquired through partnership and parenthood, albeit they can find fulfillment through other means, such as friends and hobbies (Rendall et al., 2011).

Fourth, part-timers, who are typically women and live with their partner and children throughout their lives, may benefit from a stable family structure when they approach retirement. They can also find it beneficial to work part-time, as it can offer flexibility and work-life balance, especially if working part-time is a desired choice. However, part-time employment is often characterized by interrupted careers, temporary contracts, and lower wages, which might lead to reduced household income, pension benefits, and wealth in later life (Madero-Cabib & Fasang, 2016; Möhring, 2021). These financial challenges could contribute to feelings of economic precarity, potentially increasing the risk of diseases and affecting life satisfaction at older ages (Baumann et al., 2022; Comolli et al., 2021).

Fifth, individuals who have been primarily non-employed in their earlier life while being married with children usually face unique disadvantages in later life. To a great extent, these are women dedicating their time to childcare and housework, which may provide a stable family life and strong familial bonds. Yet, prolonged disengagement from the labor market results in a minimal employment history, lower pension entitlements, and limited access to social security benefits, creating financial vulnerability (Halpern-Manners et al., 2015). Moreover, the physical demands of unpaid domestic work combined with restricted access to employer-sponsored health insurance or potential health-promoting environments in workplaces can exacerbate health disparities, reducing the quality of life in old age (Comolli et al., 2021).

Sixth, parents with a lifelong partner and a career of self-employment may benefit from long-term family stability. This is a trajectory most frequently followed by men, who undergo the precariousness of self-employment throughout their working lives. In most countries, self-employed people need to self-insure against unemployment and sickness and set up a private plan for retirement since they are not well-covered in insurance programs that are mandatory for employees, and they are excluded from occupational pensions, which can result in lower pension benefits and higher risks of poverty in old age (Höppner, 2021; Sevä & Larsson, 2015). While owning a business may increase wealth, self-employed individuals also often encounter liquidity problems and borrowing constraints, leading to financial distress (Cagetti & De Nardi, 2006). Despite enjoying greater work autonomy and flexibility,

the self-employed usually bear high job demands, which might contribute to occupational stress and health issues (Rietveld et al., 2015).

Ultimately, financial and health conditions resulting from these work-family trajectories guide bridge employment decisions. Although working in retirement is not solely an individual's decision but rather a household decision, involving the needs of partners, children, or other family members (Galkutė & Herrera, 2020), full-time workers with a partner and children generally are most empowered to make their own decisions. They receive steady incomes from pensions and possess assets, savings, or investments while maintaining good health, all of which enable a decent standard of living in retirement (Comolli et al., 2021). Despite these advantages, they can still choose to work in retirement, as their better financial situation reflects their position as qualified and in-demand workers, and their general better health gives them the capacity to work.

Individuals who have not followed the trajectory of full-time employment with a partner and children are more restricted in making their own decisions. They accumulate fewer pension benefits, household income, and wealth over the earlier life course, which results in financial insecurity at older ages (Halpern-Manners et al., 2015; Madero-Cabib & Fasang, 2016; Möhring, 2021). To make ends meet, they might need to work in retirement. Beyond material constraints, financial insecurity is often tied to broader disadvantages, such as lower occupational prestige, less autonomy, and a lack of recognition or appreciation during one's career (El Khawli et al., 2025; Western et al., 2012). As a result, bridge employment may not only be an economic necessity for these individuals but also a way to regain social status or fulfill psychological needs provided by work (Abeyta et al., 2017; Damman et al., 2015). However, due to work-family adversities, they suffer more from physical complaints and mental issues as they get older, rendering it unfeasible to work (Di Gessa et al., 2020; Machů et al., 2022; O'Flaherty et al., 2016). This leads us to expect that:

Compared to people working full-time over the life course while having a partner and children, people with trajectories that combine
a) full-time employment with divorce involving children
b) full-time employment with singlehood/childlessness
c) part-time employment with a partner and children
d) non-employment with a partner and children
e) self-employment with a partner and children
are more likely to be bridge-employed because of lower finances (H1), but less likely to be bridged-employed because of poorer health (H2).

Note, however, that people in full-time employment with singlehood or childlessness may also experience less financial hardship than those with a family. While they rely on a single household income or lack child-related benefits, they avoid the costs of raising children, including childcare and educational expenses. This yields greater disposable income, facilitating savings, investments, or retirement plans, which enhances financial security in later life. Additionally, having fewer family obligations gives them greater flexibility for career advancement, such as pursuing further training or relocating for job opportunities, making them 'the ideal worker' with commitment and competence (Leslie et al., 2016). This can motivate them to work in retirement as long as their health permits. Therefore, the opposite of H1b might also hold, meaning that full-time employed singles or childless couples are more likely to be bridge-employed than their counterparts with a partner and children because they have more financial resources. For reasons of consistency, we used the financial necessity argument to formulate H1b.

Country Level: Welfare State

Cumulative (dis)advantage theory is useful in unraveling how individual work-family trajectories influence bridge employment decisions through the accumulation of finances and health over the life course. Yet, it is not sufficient on its own to explain interactions between life course trajectories and the broader country (policy) context in which decisions on bridge employment are taken. To substantiate such cross-level interactions, it is necessary to integrate cumulative (dis)advantage theory with frameworks that specifically address country-level influences. Therefore, we combine cumulative (dis) advantage theory and welfare state theory to argue that, after accounting for work-family trajectories, the impact of finances and health on bridge employment differs across countries.

Welfare state theory states that the level of decommodification and defamilization in a country defines social inequalities in that country (Esping-Andersen, 1999). Decommodification and defamilization indicate how much a country reduces its residents' dependency on market forces and family structures. Countries with a generous social welfare system give people the chance to live a more decent life through the implementation of social policies. Social policies enhance the welfare of people who face disadvantages during their life course, such as unemployment, poverty, and disability (Leisering, 2003). This is achieved through the provision of rights and services, and thereby the state becomes an important factor in alleviating possible negative effects of experienced individual disadvantages (Sieber et al., 2020). Even if one does not personally experience disadvantages, it remains beneficial for everyone that the state lends support for those in need, as it serves as a safety net, improving the overall standard of living and buffering social inequalities in the country (Diewald, 2016).

We here focus on two main pillars of the social welfare system that are directly relevant to the finances and health of retirees: pension and healthcare expenditure. Countries that spend more on pensions provide more financial support for retirees, ensuring financial security and preventing poverty in old age (Kuitto et al., 2023). This financial support includes not only old-age pensions that are given to everyone upon retiring or reaching a certain age. It also includes pensions for disability, widowhood, and unemployment. It means that countries investing more in pensions are doing more to help people make ends meet in retirement, even if they encounter disadvantages at older ages. Therefore, in such countries, the personal financial situation of individuals is likely less important when it comes to bridge employment decisions, as generous pension systems are expected to reduce the gap between financially secure and insecure retirees to access bridge jobs (Dingemans et al., 2017). This brings us to the following expectation:

H3: The higher the pension expenditure in a country, the weaker the (negative) relationship between finances and bridge employment.

Likewise, in countries where healthcare spending is higher, the health of individuals may play less of a determining role in bridge employment. When a country invests more in healthcare, it generally ensures universal access to medical goods and services during illness while also implementing widespread preventive measures that help combat the emergence of diseases. Hence, older adults tend to be healthier in such countries, as evidenced by higher life expectancy and lower mortality rates (Gallet & Doucouliagos, 2017). This is because more spending usually means that people have easier access to quality healthcare. As a result, retirees facing health problems in these countries have more structural opportunities to recover. This likely improves their agency over working in retirement, as

it compensates for health disadvantages and reduces the disparity in bridge employment engagement between healthy and unhealthy people (Madero-Cabib et al., 2020). This leads to the next hypothesis:

H4: The higher the healthcare expenditure in a country, the weaker the (positive) relationship between health and bridge employment.

Our conceptual framework, including the hypotheses, is illustrated in Figure 4.1.

4.3 Methods

Data

To test our expectations, we used data from SHARE (Börsch-Supan et al., 2013). SHARE provides longitudinal data on the past and current lives of individuals aged 50+. SHARE data are representative of the European older population because of probabilistic sampling methods and are gathered with computer-aided face-to-face personal interviews. So far, SHARE has collected nine waves of data. Waves 1, 2, 4, 5, 6, 8, and 9 were designed as prospective surveys concerning current life circumstances. Wave 3 was a retrospective survey enabling the collection of accurate details about past life events through a life history calendar technique (Schröder, 2011). This retrospective survey, known as SHARELIFE, was also administered in wave 7, which also had a prospective part.

In this chapter, we combined data from the retrospective and prospective surveys of SHARE. The data on the work-family trajectories were accessible only in the retrospective surveys (waves 3 and 7). Accordingly, we first selected respondents who participated in a retrospective survey and for whom a work-family trajectory was established in Chapter 2. Among these respondents, we selected those who also took part in a prospective SHARE survey because the data on finances, health, and bridge employment were available only in prospective surveys. Since our work-family trajectories covered the pre-retirement lifespan from the age of 15 to 49, people had to be at least 50 years old, experienced retirement, and retired after the age of 50 in the prospective surveys to be included in the analysis. This enabled a comprehensive analysis of bridge employment as a flexible phase, also capturing early retirees who might re-enter work or continue working for various reasons.[1] Applying these criteria resulted in an analytical sample of 58,644 individuals from 28 European countries.

Measurement

Dependent Variable

Consistent with the literature, we operationalized bridge employment as the simultaneous receipt of income from any type of employment and any type of pension remuneration (Beehr & Bennett, 2015). Accordingly, we determined the employment and retirement status of respondents based on

[1] Limiting the sample to those retiring at the age of 60+ largely produced similar results, except that the interaction between perceived health and healthcare expenditure disappeared. Two notable differences emerged when focusing on those who retired at the age of 65+. First, only part-time employed and self-employed partnered parents were more likely than full-time employed partnered parents to engage in bridge employment. Second, there was an interaction between financial comfort and pension expenditure, such that the positive link between financial comfort and bridge employment weakened in countries with higher pension expenditure.

Figure 4.1 Conceptual framework

the incomes and pensions they received, rather than using self-reported employment status. Given the nature of our data, with individuals observed across multiple waves, we tracked people across all prospective waves in which they participated and assessed the employment and retirement status at each wave. If people reported regular incomes from both work and retirement in the same wave, we classified them as working retirees in that wave. If they received only pension income, we classified them as permanent retirees in that wave. After doing this in each wave, we looked at the situation across all waves. If a person was always classified as a permanent retiree across the waves, we included them as a permanent retiree in our dependent variable, also treating them as the reference group (score 0). If someone had at least one wave in which they were classified as a working retiree, we scored them as a working retiree (score 1). For respondents who were coded as working or permanent retirees in multiple waves, we took the first observation. This helped us minimize the time gap between the measurement of the dependent variable and the work-family trajectories.

Independent Variables

Work-family trajectories were taken from Chapter 2, where we used the two retrospective SHARELIFE surveys to provide an extensive measurement of work-family trajectories. As detailed in Chapter 2, we identify six types of work-family trajectories covering ages 15-49, meaning that we do not account for trajectories from age 50+. However, we draw our mediators from the period between the end of the work-family trajectories (age 49) and the retirement transition (age 50+), and we focus on finances and health. Although we do not know the exact nature of people's trajectory during this period, we know how it shaped their finances and health, which is consistent with the idea of mediation, requiring temporal order between variables. The six work-family trajectories are described in Table 4.1.

Mediator Variables

To set a temporal order between people's work-family trajectories (ages 15-49) and the mediating variables, we retrieved finances and health from the prospective waves in which respondents were aged 50+. This means that for all respondents, the mediators refer to the period after their work-family trajectory. To ensure that the mediators also concerned the period before retirement, we used finances and health in the (latest) wave in which people were not yet retired. This applied to 44% of our sample, meaning that for about half of our sample, the mediators were measured after the work-family trajectories and before retirement. That is, the independent, mediator, and dependent variables are measured in a logical theoretical order. Yet, for the other half (56%), it was impossible to obtain values from the period before retirement, as they were already retired when they entered the study. Therefore, for these respondents, we measured finances and health in the same wave as the dependent variable.[2]

We took finances and health variables from SHARE's imputations module, which provides multiple imputations for missing values due to item nonresponse errors (De Luca et al., 2015).[3]

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[2] Restricting the analysis to respondents for whom both mediators and the dependent variable were measured across different waves with a clear temporal order produced the same findings as the current ones.

[3] SHARE distributes five implicates for each imputed value. Because these implicates are independent from one another, there is no specific reason to choose one over the other. Yet, we used the fourth implicate, as it yielded higher correlations among variables from other implicates. The results remained unchanged when we used a different implicate, for example, the first one. For further details, please see the SHARE Release Guide 9.0.0.

Finances focused on the financial situation of the household, evaluated with a single item: "Thinking of your household's total monthly income, would you say that your household is able to make ends meet?" The response option ranged from 1 = With great difficulty to 4 = Easily, with higher scores showing more financial comfort. Health was also assessed with a single item for which respondents rated their general health on a 5-point scale from 1 = Excellent to 5 = Poor. We reverse-coded the responses so that higher scores reflected better perceived health. The correlation between financial comfort and perceived health was moderate ($r = .30$).[4]

Moderator Variables

We derived data on a country's pension and healthcare expenditure from Eurostat (2023, 2024), both of which were time-varying, so measured longitudinally. Pension expenditure comprised the total of benefits for disability pension, early retirement due to reduced capacity to work, old-age pension, anticipated old-age pension, partial pension, survivors' pension, and early-retirement benefit for labor market reasons. Healthcare expenditure concerned the total of healthcare functions, which referred to the provision of goods and services, such as pharmaceutical products, therapeutic appliances, and various types of care, including but not limited to curative, rehabilitative, and preventive care.

These expenditures were measured as the percentage of gross domestic product (GDP), and the data came in time-series format as annual values. To account for the age structure in each year and country, we adjusted these annual values by the corresponding old-age dependency ratio (share of people aged 64+ to those aged 15-64), using World Bank (2024) data. Specifically, we divided the values in a given year and country by the old-age dependency ratio in that year and country and then multiplied the result by 10 to improve interpretability. The higher the scores on the newly computed values, the more generous the pension and healthcare system is for older people in a given country-year combination.

We linked the annual expenditure values to the years when our respondents were working or permanent retirees, meaning that our moderator variables were measured in the same period as our dependent variable. We were able to fully link pension expenditure to our dependent variable. However, healthcare expenditure could not be linked for 23% of our sample, as data was unavailable. When data was unavailable, we used healthcare expenditure from the closest available year.

Control Variables

We controlled for gender, educational level, birth cohort, and living arrangement. Gender differentiated male and female. Educational level was based on the International Standard Classification of Education (ISCED) 1997. Those holding ISCED levels 0-2 were labeled as low-educated and those at levels 3-4 and 5-6 were labeled as moderate-educated and high-educated, respectively. Birth cohort grouped people into four categories by their year of birth: pre-1940, 1940-1945, 1946-1950, and post-

[4] We also tried the analysis by including two additional indicators for finances (income and wealth) and health (chronic diseases and depression). The results showed that these indicators were associated with work-family trajectories and bridge employment in a similar way. Yet, for individuals with work-family trajectories characterized by non-employment and self-employment, there were two differences. First, although they reported less financial comfort, these individuals reported higher wealth than full-time employed partnered parents, resulting in a positive indirect effect of wealth. Second, for these individuals, chronic diseases had an indirect effect, while perceived health did not, as in the current analysis.

Table 4.2 Descriptive statistics ($N = 58,644$)

	%	Min.	Max.	M	SD
Individual level					
Bridge employment					
Permanent retiree	73.78				
Working retiree	26.22				
Work-family trajectories					
Full-time worker, partnered parent	57.63				
Full-time worker, unpartnered parent	4.80				
Full-time worker, single/childless couple	10.11				
Part-time worker, partnered parent	5.13				
Non-worker, partnered parent	14.26				
Self-employed, partnered parent	8.07				
Finances and health					
Financial comfort		1	4	2.74	0.99
Perceived health		1	5	2.81	1.05
Gender					
Female	54.46				
Male	45.54				
Educational level					
Low-educated	40.11				
Moderate-educated	39.33				
High-educated	20.56				
Birth cohort					
Pre-1940	28.42				
1940-1945	20.45				
1946-1950	20.72				
Post-1950	30.41				
Living arrangement					
Partner in the household	71.30				
No partner in the household	28.70				
Child(ren) in the household	10.41				
No child(ren) in the household	89.59				
Country level					
Pension expenditure		2.19	7.11	4.36	0.89
Healthcare expenditure		1.82	6.04	3.30	0.66

Source: SHARE waves 1-9 and Eurostat.

1950. Finally, we assessed the living arrangement at the time the dependent variable was measured, indicating whether the respondent had a partner and children living in the same household.[5]

The descriptive statistics of all variables are given in Table 4.2.

Analysis

To handle the hierarchical structure of the data, we conducted multilevel regression analyses with three levels: individual, country-year, and country. We employed linear probability models, as logistic regression models are sensitive to omitted variables and produce hard-to-interpret estimates that are also difficult to compare across models (Mood, 2010). Additionally, logistic regressions have a hard time converging when estimating complex hierarchical models with random coefficients and cross-level interactions.[6] Therefore, we estimated linear probability models, for which we applied the restricted maximum likelihood procedure because it yields more unbiased estimates of variance components than the maximum likelihood method (Verbeke & Molenberghs, 2009).[7]

We began with an empty, random-intercept model to calculate intraclass correlations. These correlations were 0.16 at the country-year and 0.10 at the country level, both statistically significant. This indicated that 16% and 10% of the total variance in bridge employment was due to clustering at the country-year and country level, respectively, supporting the choice of multilevel modeling.

Having confirmed the suitability of multilevel modeling, we proceeded with the hypothesis testing. To assess our individual-level hypotheses, we first added the work-family trajectories along with control variables, including the country-level factors, to compute the total effects of the work-family trajectories (Model 1). Then, we examined the indirect effect of work-family trajectories by introducing finances and health as mediators (Model 2). To complement this model with formal mediation analysis, we used the parallel mediation model in the PROCESS macro in SPSS (Hayes, 2022), including control variables as well as dummy variables for countries and years as covariates, with 5,000 bootstrap samples to obtain 95% confidence intervals. We also included pension and healthcare expenditures as covariates to account for the direct effects of these country-level factors on finances and health. We considered this approach appropriate since the mediation occurs exclusively at the individual level, and we did not expect cross-national variation in the indirect effects.

After adding the mediators, we introduced their variance components at both the country-year and country levels. The random slopes were statistically significant, meaning that the impact of the mediators on bridge employment varied across country-year combinations and countries. This suggests that time-varying country characteristics should be able to explain (part of) this variation, leading us to investigate interactions between the individual-level mediators and country-level moderators. To this end, we included interactions between finances and pension expenditure (Model 3) and health and healthcare expenditure (Model 4). Country-level variables were centered at their mean values across all models to facilitate the interpretation of the regression coefficients. The last step of the analysis was to run all models separately for men and women to explore gender differences.

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[5] In addition to partners and children, we also considered the presence of parents in the household. However, only about 1% of the sample had a parent in the household, which was unrelated to bridge employment. Relatedly, we also examined the role of looking after grandchildren in bridge employment. The results showed that people who did and did not look after a grandchild did not differ from each other in bridge employment.

[6] While logistic regressions were not feasible to run with random coefficients and cross-level interactions, we were able to run logistic regressions for the purely individual-level part of the analysis. The results of these models replicated those of the linear probability models.

[7] Using the maximum likelihood estimation procedure delivered the same results.

4.4 Results

Starting with some descriptive findings, we observed that permanent retirement was more common than working in retirement, with over 50% of retirees in all countries leaving the workforce for good. On average, working retirees returned to employment 1 year after retiring, with 77% of them doing so in the same year they retired. They generally participated only in dependent employment (73%), while some earned income from both dependent and self-employment at the same time (17%), and the smallest group consisted of those who engaged solely in self-employment (10%). Additionally, 64% of working retirees were observed to be working just in one wave, indicating a short duration of bridge employment, likely for a maximum of 2 years, given the time interval between waves. This suggests that many people view bridge employment as a transitional phase, which aligns with the concept of bridge employment as an intermediary stage between active employment and permanent retirement. In terms of the type of pensions received, 70% of bridge employees relied purely on public pensions, with the remaining majority combining public pensions with occupational or private pensions. The descriptive findings for all variables across countries are available in Table C1 in the Appendix C.

The Role of Work-Family Trajectories

Model 1 in Table 4.3 shows the total effects of the work-family trajectories on bridge employment, including the controls. Compared to individuals who were in a full-time job and had a traditional family arrangement over their pre-retirement life course, continuously full-time working divorced or widowed people with children were 2.5 percentage points more likely to work in retirement, whereas their single or childless counterparts were 2.7 percentage points less likely to work in retirement. Parents in a stable relationship who were part-time employed or self-employed for most of their lives had a higher likelihood of engaging in bridge employment than full-time employed partners who had children by a margin of 8 and 12.4 percentage points, respectively. Yet, people with a conventional family configuration who were largely non-employed were 3 percentage points less likely to perform paid work during retirement relative to their full-time employed counterparts.

The Role of Finances and Health

Model 2 in Table 4.3 included finances and health as mediators. More financial comfort and better perceived health both were associated with a higher likelihood of bridge employment. After including finances and health, differences in bridge employment between full-time employed partnered parents and those with other trajectories remained statistically significant. Yet, the magnitude of coefficients either decreased or increased relative to Model 1. A decrease in coefficients indicates mediation, where finances and health explain the relationship between work-family trajectories and bridge employment. An increase in coefficients suggests suppression, which means that the predictive power of work-family trajectories is enhanced by adding finances and health to the model. A formal assessment of indirect effects using the PROCESS macro in SPSS provided additional insights into these patterns.

As depicted in Figure 4.2, we observe five statistically significant indirect effects through finances (all suppression) and two via health (both mediation). Starting with the pathways through financial comfort, single or childless couples with continuous full-time employment showed more engagement in bridge employment than married or cohabiting parents with similar work histories because of higher financial comfort. Compared to the reference trajectory, unpartnered parents with work careers

characterized by full-time employment and partnered parents who were mostly part-time employed, non-employed, or self-employed were less likely to work in retirement, which was attributed to their poorer financial situation. These findings are not in line with H1a to H1e, because, instead of mediating the relationship between the work-family trajectories and bridge employment, finances act as a suppressor of this relationship, which implies there are other (potentially more important) factors than finances that explain the connection between the work-family trajectories and bridge employment. We explore these alternative explanations in the discussion.

Moving to the indirect effects via health, people who worked full-time and remained single/childless as well as the non-employed engaged less in bridge employment than partnered parents who were full-time employed, which was explained by their poorer perceived health. These findings support H2b and H2d. We found no indirect effects via health for the other trajectories, refuting H2a, H2c, and H2e.

The Role of Pension and Healthcare Expenditure

Model 3 in Table 4.3 added the interaction between financial comfort and pension expenditure to test H3, and Model 4 added the interaction between perceived health and healthcare expenditure to test H4. As opposed to H3, there was no interaction between financial comfort and pension expenditure. Yet, healthcare expenditure moderated the role of perceived health in bridge employment. As Figure 4.3 shows, perceived health was unrelated to bridge employment when healthcare expenditure was at minimum levels (e.g., in Greece and Italy). When healthcare expenditure was above minimum levels, perceived health positively predicted bridge employment, and this positive relation became stronger with increases in healthcare expenditure. This contradicts H4, as we expected this positive relation to become weaker, with a reduction in the relative advantage of being healthier for working in retirement. On the contrary, this finding suggests that countries with higher healthcare expenditure (e.g., Belgium, France, and the Netherlands), reinforce good health as a precondition for bridge employment.[8]

Gender Differences

To explore gender differences, we performed the analyses separately for men and women. As can be seen in the tables and figures given in the Appendix C, the results among men and women were virtually identical in terms of the total effects. The only exception was that the total effects of the trajectories featuring divorce and non-employment were marginally significant among men ($p < .08$).

Regarding the indirect effects, the findings for men and women were largely the same. The only difference compared to the main analysis was that there was no longer an indirect effect through financial comfort for singles or childless couples for both genders, likely because of lower statistical power after splitting the sample. As for the health-related indirect effects, we observed two notable differences between men and women. First, there was a negative indirect effect through perceived health for single or childless men with full-time employment, as in the main analysis. However, for women with the same trajectory, perceived health had no indirect effect. Second, there was a negative indirect effect through perceived health among full-time working divorced fathers and part-time working married fathers, while no such effect existed among women and in the main analysis.

[8] In an additional analysis, we ran the models separately for Western and Eastern European countries. The interaction between perceived health and healthcare expenditure emerged only for Western European countries.

Table 4.3 Multilevel regression analysis of bridge employment versus permanent retirement (N = 58,644)

	Model 1			Model 2			Model 3			Model 4		
Individual level	*B*		*SE*	*B*		*SE*	*B*		*SE*	*B*		*SE*
Work-family trajectories												
Full-time worker, unpartnered parent (vs FT-PP)	0.025	**	0.008	0.029	***	0.008	0.031	***	0.008	0.031	***	0.008
Full-time worker, single/childless couple (vs FT-PP)	-0.027	***	0.006	-0.026	***	0.006	-0.024	***	0.006	-0.024	***	0.006
Part-time worker, partnered parent (vs FT-PP)	0.080	***	0.008	0.082	***	0.008	0.083	***	0.008	0.083	***	0.008
Non-worker, partnered parent (vs FT-PP)	-0.030	***	0.006	-0.023	***	0.006	-0.026	***	0.006	-0.026	***	0.006
Self-employed, partnered parent (vs FT-PP)	0.124	***	0.006	0.124	***	0.006	0.122	***	0.006	0.122	***	0.006
Finances and health												
Financial comfort				0.020	***	0.002	0.019	***	0.005	0.019	***	0.005
Perceived health				0.031	***	0.002	0.027	***	0.006	0.028	***	0.006
Gender												
Female (vs male)	-0.055	***	0.004	-0.055	***	0.004	-0.056	***	0.004	-0.056	***	0.004
Educational level												
Low-educated (vs high-educated)	-0.117	***	0.005	-0.093	***	0.005	-0.093	***	0.005	-0.092	***	0.005
Moderate-educated (vs high-educated)	-0.078	***	0.005	-0.066	***	0.005	-0.063	***	0.005	-0.064	***	0.005
Birth cohort												
1940-1945 (vs pre-1940)	0.120	***	0.005	0.116	***	0.005	0.115	***	0.005	0.115	***	0.005
1946-1950 (vs pre-1940)	0.218	***	0.005	0.212	***	0.005	0.213	***	0.005	0.213	***	0.005
Post-1950 (vs pre-1940)	0.340	***	0.005	0.339	***	0.005	0.345	***	0.005	0.345	***	0.005
Living arrangement												
Partner in the household (vs. no)	-0.048	***	0.004	-0.053	***	0.004	-0.052	***	0.004	-0.052	***	0.004
Child(ren) in the household (vs. no)	0.013	*	0.006	0.017	**	0.006	0.018	**	0.006	0.018	**	0.006

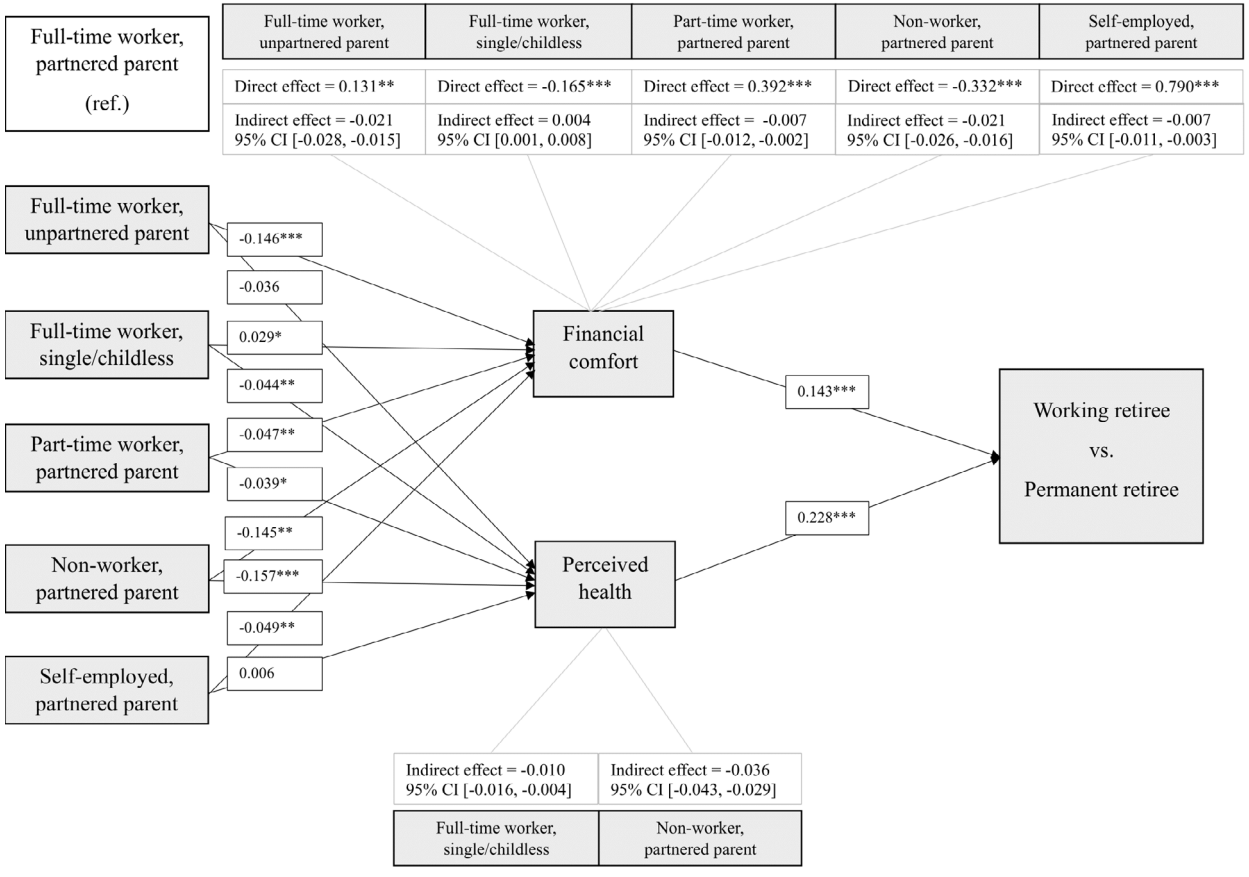
Table 4.3 (continued)

	Model 1			Model 2			Model 3			Model 4		
	B		*SE*	*B*		*SE*	*B*		*SE*	*B*		*SE*
Country level												
Pension expenditure	-0.005		0.013	0.002		0.013	0.010		0.013	0.012		0.011
Healthcare expenditure	0.051	*	0.021	0.049	*	0.021	0.033	*	0.017	0.018		0.018
Cross-level interactions												
Financial comfort X pension expenditure							0.001		0.003			
Perceived health X healthcare expenditure										0.012	*	0.005
Intercept	0.191	***	0.026	0.039		0.027	0.056	**	0.016	0.055	**	0.016

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. FT-PP: Full-time worker, partnered parent. Models include variance components, which are all statistically significant.

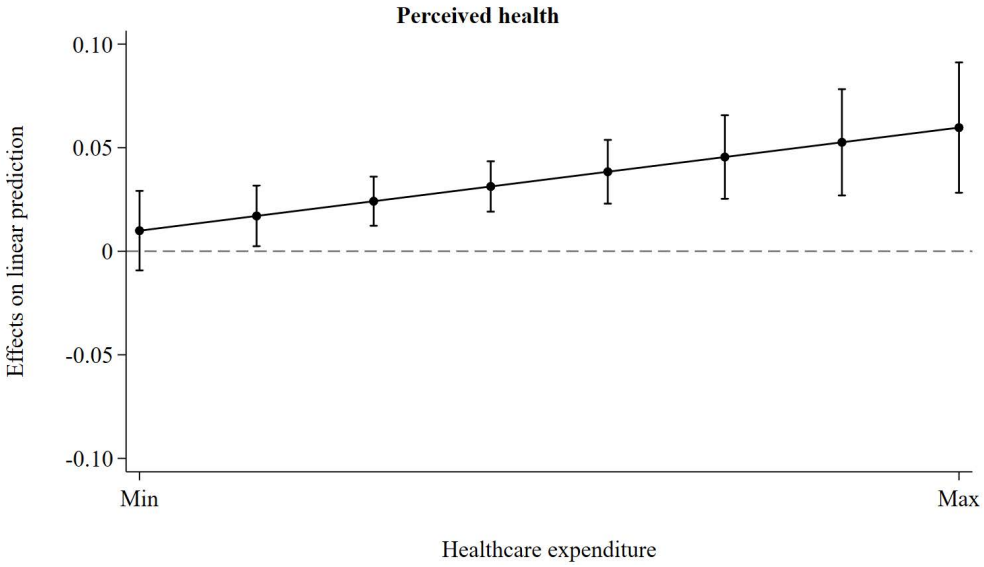
Source: SHARE waves 1-9 and Eurostat.

Figure 4.2 Mediation results from the PROCESS macro in SPSS



Note: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. Direct and indirect effects are on a log-odds metric. Controls, including country-level factors, are not shown.

Figure 4.3 Average marginal effects of perceived health on bridge employment versus permanent retirement by healthcare expenditure, with 95% confidence intervals



Finally, no significant interactions were found between finances and pension expenditure or health and healthcare expenditure for either gender. This contrasts with the main analysis, where an interaction between health and healthcare expenditure was detected. The absence of this interaction in the gender-split analyses is likely due to reduced statistical power resulting from smaller sample sizes.

Overall, these exploratory analyses suggested that the findings for men and women were mostly similar to the findings from the main analysis and also to each other. The major difference is that neither finances nor health plays a role in the bridge employment of single or childless women with full-time careers. In contrast, for divorced and part-time employed men, both finances and health play a role in bridge employment, although finances – as suppressors – point to the potentially more important role of other factors. We theoretically reflect on these exploratory findings in the discussion.

4.5 Discussion

Previous studies presented a partial understanding of bridge employment, as they left it unclear whether, why, and under which conditions bridge employment is preferred among people with advantageous or disadvantageous life courses. In this chapter, we aimed to paint a clearer picture by taking a comparative life course perspective. To this end, we used both retrospective and prospective data at the individual level, linked to time-series data at the country level. This holistic and rigorous approach helped us gain important insights by answering three research questions.

Our first research question dealt with the association between work-family trajectories and bridge employment. Consistent with past work from a life course perspective (Brydsten et al., 2025; Burkert

& Hochfellner, 2017; Dingemans & Möhring, 2019; Madero-Cabib and Biehl, 2021), we found that compared to continuously full-time employed persons with a traditional family, those who were mostly divorced, part-time employed, and self-employed were more likely to work in retirement. However, singles or childless individuals who worked full-time during their career and those who were mostly non-employed while being a partnered parent were less likely to be bridge-employed. The associations for self-employed and part-time workers were relatively strong, while those for divorced, single, and non-employed people were comparatively weaker. This suggests that flexible work arrangements over the life course, such as part-time and self-employment, are particularly conducive to bridge employment. Individuals with flexible work histories thus seem to carry this flexibility into retirement, given that bridge employment represents a flexible option before permanently retiring.

Our second research question examined whether finances and health explained the relationship between work-family trajectories and bridge employment. Contrary to our expectations, results indicated that lacking financial comfort was actually a reason not to engage in bridge employment for people with life course trajectories that involved divorce in the family domain and mostly part-time, non-, and self-employment in the work domain, at least compared to those predominantly in full-time employment in a nuclear family. It has to be said that these indirect effects were rather small though. Interestingly, yet plausibly, single or childless couples with continuous full-time employment careers have bridge jobs more often than married or cohabiting parents with similar work histories because their financial situation is better, whereas they are less likely to be in bridge employment due to poorer health. A potential reason might be that a lot of financial resources go to children while remaining single or childless may also hint at a stronger work orientation (Leslie et al., 2016). Poorer health was also a barrier to bridge employment among partnered parents with a trajectory of non-employment. Overall, these findings show that while health is related to bridge employment across diverse work-family trajectories in a consistent way, the role of finances is more ambiguous. This nuanced insight advances the literature, which also reported mixed effects of finances on bridge employment (Kolev & Pascal, 2002; Platts & Glaser, 2025), by demonstrating that pre-retirement work-family trajectories determine people's financial situation later in life and, in turn, their likelihood to work in retirement.

Importantly, relationships between work-family trajectories and bridge employment were hardly mediated by finances and health, and in the case of finances, all the relationships were suppressed. This means that other, unmeasured, factors have more potential to explain why work-family trajectories are related to bridge employment. For instance, divorced people could be working in retirement for social engagement, and part-time workers, who are accustomed to balancing flexible work arrangements with other life domains, might be maintaining this lifestyle or identity during retirement (Galkutė & Herrera, 2020; Sullivan & Al Ariss, 2019). However, as SHARE does not provide social or psychological motivations for working, we were unable to test such explanations. Therefore, we call for exploiting alternative datasets to study these and other alternative mechanisms.

Our third research question concerned whether the role of finances and health in bridge employment was dependent on a county's generosity of pension and healthcare expenditure. We found no moderation by pension expenditure for those retiring at the age of 50+, but among people retiring at 65+, the positive link between financial comfort and bridge employment was weaker in countries with higher pension expenditure. This suggests that generous pension spending reduces the gap in access to bridge jobs between financially comfortable and vulnerable retirees, likely because it refers to people in the age when they receive state pensions. For younger retirees, other country characteristics should explain the variation between European countries in the effect of finances on bridge employment. Future research therefore could explore factors like sickness or unemployment benefits as moderators. Regarding the moderating role of healthcare expenditure, we found that in countries with more healthcare expenditure, people with better health were even more likely to work

in retirement. This implies that higher healthcare spending elevates the importance of good health for bridge employment, enlarging the disparity between healthy and unhealthy older adults in working during retirement.

We also found some gender differences, although these only concerned the role of finances and health in the relationship between work-family trajectories and bridge employment. Specifically, finances and health did not play a mediating role in bridge employment decisions of single or childless women with full-time work careers, while finances functioned as suppressors for divorced fathers in full-time jobs and for married fathers in part-time jobs. This suggests that for both men and women with normatively non-standard work-family trajectories, other factors, such as intrinsic motivations, personal fulfillment, and societal expectations, might be alternative drivers of engagement or disengagement in bridge employment. Future research is recommended to investigate the nuanced interactions between work-family trajectories, gender, and alternative mechanisms, including social norms, leisure and volunteering activities, or caregiving responsibilities, using data that include these dimensions.

From a practical point of view, these findings are informative for social policies targeted at improving the welfare of individuals in retirement, particularly considering different work-family trajectories, finances, and health. For persons with work-family trajectories characterized by full-time employment with singlehood or childlessness and non-employment or self-employment with lifelong marriage involving children, policies may aim to mitigate the financial and health disparities that push or pull them into employment when they retire. Moreover, our findings suggest that higher healthcare expenditure in a country enhances the importance of good health for taking bridge jobs. Therefore, countries, especially those with lower spending, could invest more in healthcare to support healthier aging and promote extended working lives or continued labor market participation among older adults.

Our conclusions should be considered in light of three limitations. First, as commonly done, bridge employment was evaluated by receiving income from both employment and pensions. This approach might not capture undeclared work, potentially leading to the misclassification of some working retirees as permanent retirees. Second, defining retirement based on pension receipt may have produced a gender bias in sample selection, as many women do not receive pensions. Future research can combine different sources (e.g., surveys, official records, qualitative interviews) to provide additional insights into work and retirement activities. Third, although we controlled for a person's living arrangement at the time of retirement, we did not account for partners' trajectories or health situations. It could be that a person with a disadvantageous work trajectory does not need to work in retirement thanks to the advantageous work trajectory of their partner, whereas an individual who is healthy enough to continue working chooses permanent retirement to care for a sick partner. These dyadic relations likely affect bridge employment decisions, warranting further investigation.

Despite these limitations, we contributed to the understanding of bridge employment. We took a comparative life course approach, providing insights into why people's work-family trajectories explain whether they work in retirement, conditional on a country's welfare generosity. Our findings underlined the importance of finances and health as facilitators and barriers to bridge employment for people who were mostly single, childless, non-employed, and self-employed over extended periods of their lives before retirement. The role of health in bridge employment was dependent on healthcare expenditure, such that in countries with higher expenditure, individuals in better health were more inclined to take bridge jobs. Against the backdrop of rapidly aging populations and ongoing pension reforms, these findings refer to the need for further research and social policies to address financial and health inequalities in retirement transitions for older people with diverse work-family trajectories.

Chapter 5

Life Course Trajectories and Retirement Adjustment Among Men and Women in the Netherlands

A slightly different version of this chapter is currently under review at an international journal. Mark Visser and Kène Henkens are co-authors of this chapter.

The authors jointly developed the idea and design for the study reported in this chapter. Firat prepared the data, conducted the analysis, and wrote the main part of the manuscript. Visser and Henkens contributed substantially to the manuscript.

The study on which this chapter is based on was presented at the Dutch Demography Day in Utrecht on February 12, 2025, and received feedback at the Sociology Seminar at Radboud University on February 20, 2025.

Abstract

This chapter examines life courses and retirement adjustment in the Netherlands. Gender-split latent class analyses identify four distinct trajectories among men and women, covering life events in work, family, health, care, and volunteering. The largest trajectories indicate traditional male and female life courses. Compared to those with traditional male trajectories, men with lifelong volunteering adjust better to retirement, financially, socially, and psychologically. Despite family and health issues, men making careers through mobility miss the prestige of work less, but men with late-career mobility are similar to the reference group. Women combining work with care and volunteering adjust better to retirement, missing work-related income, prestige, and role fulfillment less, while work-oriented carers do not differ from women with traditional female trajectories. However, mothers re-entering employment after childcare face financial challenges in retirement. These findings highlight gender differences in life courses and support the dynamic resource perspective on retirement adjustment.

5.1 Introduction

In today's aging world, retirement is a major life transition for many people. With this transition, people adopt new routines, renegotiate social relationships, and redefine personal identity in the absence of work-related roles (Wanka, 2020). This means that retirees go through a complex process of adjustment, where they deal with the changes that retirement brings (Barbosa et al., 2016).

Retirement adjustment refers to the extent to which individuals integrate retirement into their lives and feel comfortable with the changes (Van Solinge, 2013). Research has found substantial differences between individuals, with some adjusting easily to retirement and others having difficulties. This variation is often linked to changing resources, including finances and health, and characteristics of the retirement transition, such that those with more resources and voluntary transitions adjust better (Van Solinge & Henkens, 2008). However, these findings are based on personal circumstances during or after retirement, leaving it unclear how the capacity to navigate retirement unfolds over the life course.

It is valuable to examine retirement adjustment from a life course perspective because focusing only on the period around retirement overlooks how experiences evolve and interact over time. That is, discrete events at single time points are informative, but fail to capture evolving and interactive patterns that can collectively determine retirement adjustment. Thus, for a better understanding of retirement adjustment, this chapter argues that it is important to examine people's dynamic trajectories that span multiple stages and domains over the life course. Retirement adjustment is then not only seen as a process dependent on current resources, but also as a process embedded in the entire life course.

When studying how pre-retirement life course trajectories translate into differences in retirement adjustment, a key component to consider is gender. Women's careers typically include interruptions for childbirth and provision of care to ill or aging persons (Raiber et al., 2024). While women earn less due to caregiving and the motherhood penalty, men mostly keep working continuously and earn more thanks to the fatherhood bonus (Brady, 2024). These disparities persist in retirement, with women receiving lower pensions and caring more for grandchildren or parents (Grünwald et al., 2024). Women also do more unpaid work for society, meaning that they volunteer more within organizations, both during their career and in retirement (Wiepking et al., 2023). In contrast, men do more leisure or paid work after retiring (Wanka, 2020). Overall, men and women forge distinct paths in earlier life that crystallize in later life, producing potential differences in retirement adjustment.

In this chapter, we answer two questions: (1) *How do life courses, including work, family, health, care, and volunteering trajectories before retirement, unfold among men, and how do they unfold among women?* and (2) *To what extent do life courses explain retirement adjustment for men and for women?*

By answering these questions, we make three contributions. First, we deliver a holistic analysis of the life course by considering work, family, health, care, and volunteering trajectories simultaneously. We do so for both men and women. Prior research focused exclusively on work-family trajectories, showing that the typical configuration combines full-time employment with marriage and parenthood (Firat et al., 2023). Health has often been placed within work trajectories, revealing career breaks owing to illness, but masking the evolution of health (Machů et al., 2022). Notably, caregiving and volunteering have been largely ignored or explored in isolation, despite their interplay with work, family, and health via time commitments, role transitions, and physical or mental demands (Burr et al., 2007; Carr et al., 2023). By integrating caregiving and volunteering histories with work, family, and health biographies, we account for multiple life domains and paint a fuller picture of the life course.

Second, we offer new insights into the dynamic nature of life courses with a nuanced measurement, especially in the work domain. Unlike earlier studies prioritizing work hours (full-, part-time) and

types (dependent, self-employment), we examine events that capture labor market mobility. Besides self-employment and unemployment, we assess promotion, demotion, employer and occupation changes, and quitting work for children. While promotions and demotions signal opportunities or constraints for career advancement, changes in employers and occupations reflect variations in job stability and access to better jobs. Leaving work for childcare illustrates the professional consequences of caregiving. Using these indicators, we move beyond static categorizations to reveal the impact of transformative experiences, which improve our understanding of gender inequalities, as men and women face distinct facilitators and barriers in career progression (Deschacht, 2017; Pearlman, 2018).

Third, we extend the holistic and dynamic life course perspective to retirement adjustment. Some studies linked work-family trajectories to retirement timing, voluntariness, and income, but the role of multi-domain trajectories in retirement adjustment remains unknown (Madero-Cabib & Fasang, 2016). The retirement adjustment literature has inspected events at certain life stages within isolated domains (Barbosa et al., 2016). We fill this gap by investigating how complete life course trajectories across multiple life domains influence retirement adjustment among men and women. In doing so, we aim to advance our knowledge on the cumulative effect of earlier-life experiences on retirement adjustment.

Traditionally, retirement adjustment has been studied with measures of subjective well-being, happiness, or life satisfaction (Wang et al., 2011). Though useful, these measures omit the specific adaptation to the loss of work-related roles. We follow Damman et al. (2015) and adopt a multidimensional measure concerning how much retirees miss different aspects of work, including income, social contacts, and societal prestige. We expand this measure with societal role fulfillment, since work grants not only financial and social but also psychological rewards through a sense of meaning and recognition, which are central to fulfilling roles in society (Rosso et al., 2010). Our adjustment measure displays multiple facets of missing work after retirement and enriches our multi-sphere life course approach, particularly in caregiving and volunteering spheres that are closely related to societal role fulfillment, helping us better illuminate how men and women adjust to retirement.

Our study in this chapter draws on the Netherlands Interdisciplinary Demographic Institute's Pension Panel Study (NPPS), using data from workers transitioning into retirement, aged 60-65 at baseline. We encompass eleven life events for each decade of life from age 20 to 59 across five life domains (work, family, health, care, and volunteering), enabling a comprehensive analysis of the life course. To construct diverse types of life courses, we apply latent class analysis for men and women separately, which simplifies patterns of interactions across domains to identify distinct subgroups that share similar trajectories in different domains. Finally, we perform gender-split regression analysis, where we use the identified trajectories as predictors of missing four aspects of work after retirement, covering income, social contacts, societal prestige, and role fulfillment.

5.2 Contextual Background

The study in this chapter takes place among Dutch cohorts born between 1950-1955, who established their adult life course roughly between 1970-2020. These years provide a compelling example of how historical time, institutional arrangements, and social norms shape individual life courses, especially in a gendered way. In the Netherlands, the post-war economic recovery led to industrialization and labor expansion during the 1950s, which under religious and political influence, reinforced the male breadwinner and female homemaker model. Men were expected to occupy stable positions in dependent jobs, with careers characterized by opportunities for promotions and upward mobility, while events such as demotion, unemployment, or self-employment were viewed as significant

disruptions to this normative path. Women, in contrast, were encouraged to take on the unpaid work of childcare and homemaking.

The rise of the welfare state institutionalized the division of labor through conservative policies until the 1980s, such as tax incentives for single-income households and limited access to childcare services, further constraining women's labor market participation. Because of secularization and female educational expansion since the 1960s, societal attitudes began to challenge traditional gender roles. This prompted the emergence of dual-earner couples in the 1970s, meaning that more women entered the workforce, with our female cohorts being the forerunners of this movement (Van Gils & Kraaykamp, 2008). With increased workforce participation, women became economically less dependent on men, resulting in more complex family events being observed among women, including singlehood and divorce (Kalmijn et al., 2004). Their careers have also been more complex, with many women working less or stopping work after childbirth (Begall & Grunow, 2015).

Not only caring for children, but also for ill or aging persons affected women's ability to maintain employment, while men's trajectories were less interrupted by such tasks (Raiber et al., 2024). Importantly, the health of both men and women in the Netherlands has generally been good, thanks to the generous government spending on healthcare, lending access to high-quality medical services (Mackenbach et al., 2011). In parallel, with political and cultural encouragement for civic engagement, volunteering emerged as a critical domain for many Dutch adults (Dekker, 2019), particularly those holding resources to contribute to society (Meijeren et al., 2025). Volunteering created an avenue for social involvement, although its role often reflected the gendered principle of care and informal support, with women expected to give more to the community (De Wit & Bekkers, 2016).

Our cohorts ended their careers mainly between 2015-2022, when early retirement programs were abolished and longer working lives were promoted, with statutory retirement ages rising from 65 in 2015 to 67 in 2022. Dutch retirees tend to have a good standard of living, attributed to the Dutch pension system (Ebbinghaus, 2021). This system stands out for its generosity, offering higher income replacement rates compared to other countries. The strength of the system lies in its multi-pillar structure, combining a universal flat-rate state pension with quasi-mandatory earnings-related occupational pensions. Although women accrue lower occupational pensions than men because of part-time jobs and career interruptions for caregiving, couples usually merge finances (Kali et al., 2021). Consequently, most Dutch older adults enjoy financial security in retirement.

Besides financial security, Dutch people also enjoy psychological well-being in retirement. A key factor behind this is the strong support network in the Netherlands, including close family ties, active community involvement, and accessible social services. Many retirees do volunteer work, hobbies, or leisure activities, fostering a sense of meaning (Meijeren et al., 2025; Tunney et al., 2023). However, gender differences are also evident in retirement: women look after grandchildren more, sometimes alongside other caregiving tasks, whereas men pursue more paid work (Dingemans & Henkens, 2014; Grünwald et al., 2024). While the experiences of men and women differ in some regards, the institutional and social context in the Netherlands should help many people adjust well to retirement.

5.3 Theoretical Background

Life Courses

Consistent with our comprehensive approach that covers trajectories across multiple life domains with dynamic events at the intersection of those domains, we adopt a life course perspective. The life course perspective views human development as a process unfolding over time, characterized

by path dependency, where earlier events determine later ones (Elder et al., 2003). Events are also interdependent across life domains, meaning that transitions in one domain influence involvement in another, such as stopping volunteering after illness. While these mechanisms apply broadly, gender affects the formation of life courses, shaping opportunities and constraints (Rossi, 2018). Therefore, based on theory and previous findings, we anticipate that male and female life courses share some commonalities, but also exhibit important distinctions due to gendered structures. However, since we cannot know the exact features of life courses in advance, as we employ a data-driven approach, we refrain from formulating explicit hypotheses and, instead, develop general expectations.

For men, the traditional life course entails stability, particularly in the labor market, where continuous employment aligns with the male breadwinner norm. Men following this trajectory typically have early career progress, which later flattens, with a stable marriage that reinforces health, although managing work-family tasks might be stressful and harm well-being (Machů et al., 2022). Certainly, not all men pursue this path. There will be those who forge more mobile careers. A mobile career has the potential to benefit or disrupt other life domains. For some, career mobility can be smooth and upward, with promotions that enhance health and family life, as advantages tend to accumulate (Dannefer, 2003). For others, it could be more complex or intense, containing repeated job changes with breaks in between. As highlighted in the concept of boundaryless careers, high mobility fosters professional growth, yet also fuels partner conflicts and health issues (Guan et al., 2019). These challenges may create role overload and hinder civic life, reducing time for caregiving or volunteering.

A contemporary female trajectory is a woman working amid family duties. While this is common and offers stability, it also features interruptions, especially with young kids at home. As women often juggle multiple roles, they can diverge from configuration by balancing or conflicting roles (Shockley et al., 2017). Like men, women may achieve upward career mobility that supports relationships and health. Yet, unlike men, these women are likely to pair careers, families, and good health with care and volunteering. This stems from the gendered principle of informal support, prescribing women to give to communities, with stronger obligations on those having the capacity to do so (Wiepking et al., 2023). For other women, sustaining this capacity can be difficult. They might take long career breaks, change jobs, or endure joblessness, which endangers marital and health continuity. This ultimately induces competing demands across life domains, likely hampering motivation for civic participation.

Overall, we expect life courses that are typical of men and women in today's societies, involving stability and security, though in distinct ways, with more career breaks among women. Besides these normative configurations, we also envision men and women with upward career mobility, alongside favorable family and health conditions. While men in such a trajectory will likely not engage in civic activities, women will combine upward career mobility, intact family, and good health with caregiving and volunteering. Finally, for both genders, we presume groups that have turbulent careers, with struggles in work, family, and health domains, leaving less room for caregiving and volunteering.

Life Courses and Retirement Adjustment

In linking life courses to retirement adjustment, we do not formulate hypotheses because we do not know the precise nature of life courses a-priori. Still, we do propose general expectations, which are not gender-specific, as we study life courses separately among men and women. To substantiate our expectations, we use Wang et al's (2011) dynamic resource perspective on retirement adjustment. Integrating earlier theoretical frameworks, this perspective argues that adjustment to retirement is shaped by temporal changes in financial, social, and psychological resources. When these resources increase over time, retirement adjustment becomes easier, but decreases in resources, such as declining health or social engagement, can hurt adjustment. The framework also addresses heterogeneity in

retirement, recognizing that people forge trajectories with unique processes of resource accumulation.

Following this framework, we contend that financial adjustment to retirement depends on the extent to which people accumulate financial resources over the life course. Those who have been healthy with upward mobility during their careers receive higher pensions, which can mitigate the loss of income from work (Madero-Cabib & Fasang, 2016). Doing so alongside a lifelong partner may further ease financial adjustment, as stable family lives enhance wealth buildup and household income (Comolli et al., 2021). Others with a history of employment instability, including unemployment, breaks for childcare, or disability-related exits, are more vulnerable to missing income from work due to lower pensions, potentially experiencing financial hardship in adjusting to retirement (Barbosa et al., 2016).

Social adjustment to retirement is determined by the continuity of social resources over the life course. Consistent employment, intact families, and civic engagement help sustain social networks in retirement, making the loss of workplace contacts less consequential (Ajrouch et al., 2016). Upward mobility with higher positions during one's career can buffer against the societal prestige loss in retirement, as prior status may still confer social recognition (Damman et al., 2015). In contrast, individuals with turbulent careers might grapple with social adjustment, especially if career instability weakens family ties. If career mobility was paired with health problems, opportunities for caregiving and volunteering could be constrained, exacerbating social adjustment difficulties (Burr et al., 2021).

Psychological adjustment to retirement lies in cultivating psychological resources over the life course. Retirees retaining good health, stable families, and upward careers before retirement are likely to enjoy a smooth psychological adjustment. Good health assists participation in productive activities, partners and children offer emotional support, and employment enables societal contributions (Lee et al., 2023). Holding higher positions can boost psychological adjustment by fostering a sense of fulfillment through mentoring and supervision. Those giving care and volunteering may find substitute roles that provide purpose in life and appreciation by others (Mutchler et al., 2003). However, persons with work, family, or health instabilities might struggle, particularly if these experiences deprived them of alternative sources of identity and recognition, like caregiving and volunteering.

We consider people with life courses typical of men and women as reference groups because they are likely the largest groups and present a logical baseline. Relative to their counterparts, they had relatively stable lives and preserved financial, social, and psychological resources over the life course, which are expected to help retirement adjustment in all domains (Comolli et al., 2021). However, after decades of similar roles and resources, retirement can break their routines, making it hard to adjust in all domains. Understanding their adjustment requires comparison with groups facing additional advantages or disadvantages. For instance, healthy men in stable families with upward careers and working women integrating civic participation into their lives may fare better, while those with turbulent careers and work, family, or health disruptions may struggle more than these stable groups.

5.4 Methods

Data

We used data from NPPS (Henkens et al., 2017), which is a prospective cohort study of Dutch older adults. It employs a stratified sampling procedure to recruit workers from organizations covered by the three largest occupational pension funds in the Netherlands, which represent ~49% of wage-employed workers in the country. To capture the experiences of those who transition to retirement, the recruited workers are aged 60-65 at baseline and work for 12+ hours per week. The baseline (Wave

1) was administered in 2015 when 15,470 questionnaires were distributed and a response rate of 44% was achieved, with 6,793 questionnaires returned. The first follow-up in 2018 (Wave 2) was fielded among the participants of Wave 1, where 5,312 questionnaires were completed (response rate 79%). The second follow-up in 2023 (Wave 3) had a response rate of 83%, involving 4,258 questionnaires.

For the study in this chapter, we first selected individuals who participated in Wave 1 and in Wave 2 or 3 (n = 5,312). This was needed because life course variables were measured only in Wave 1, when participants were employed, and retirement adjustment variables were measured only in Wave 2 and 3, when participants were retired. Then, we selected people who were fully retired in Wave 2 or 3, as our measurement of retirement adjustment (missing work after retirement) concerned those who were fully retired (n = 4,444). Finally, we removed missing values in life course and retirement adjustment variables (n = 177), resulting in a sample of 4,267 respondents: 54.39% men and 45.61% women.

Measurement

Retirement adjustment was measured with questions regarding how much respondents missed various aspects of work since stopping work (Damman et al., 2015). Missing money/income, social contacts, and societal prestige were each assessed by single items. Missing societal role fulfillment was evaluated with a scale averaging three items: meaning something in society, meaning something to others, and appreciation by others (a = 0.89). Response options ranged from 1 = Very much to 5 = Not at all, which were reverse-coded, so that higher scores denoted a stronger missing of a given aspect, implying a harder retirement adjustment. We used responses from the wave right after a respondent's full retirement, namely Wave 2 for those retiring in Wave 2 and Wave 3 for those retiring in Wave 3.

The pre-retirement life course was measured with questions from Wave 1, asking whether and when respondents experienced certain events during their careers. Specifically, they were given 11 events to report if they had them between ages 20-29, 30-39, 40-49, and 50-59. The events were getting a higher position (promotion), getting a lower position (demotion), stopping work for children, being unemployed (> three months), changing employer, changing occupation, being self-employed, getting divorced or widowed (unpartnered), having severe physical or psychological health problems, giving long-term care, and doing volunteer work. We dropped stopping work for children between ages 40-49 and 50-59, as its prevalence beyond age 40 was negligible. This left us with 42 binary indicators spanning four decades of life across the work, family, health, caregiving, and volunteering domains.

Analysis

To identify diverse types of life courses, we conducted a gender-split latent class analysis (LCA). LCA is a person-centered clustering technique that exploits responses to categorical indicators to detect subgroups that are qualitatively unique from one another, where more indicators yield better results (Wurpts & Geiser, 2014). The subgroups share certain features and exhibit homogeneity, called latent classes, which are unobserved variables derived from responses to observed variables. It is assumed that membership in latent classes explains patterns of responses across indicators, and individuals are assigned to classes based on their probability of being in a class according to the profile of their scores.

We conducted LCA in Mplus, implementing user-specified starting values with random starts and maximum likelihood estimation with robust standard errors. For both men and women, we started with a two-class model and went up to five classes, as models became unstable after five classes. We determined the number of classes based on fit indices and theoretical interpretability. Fit indices included the Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), sample-adjusted BIC (SABIC), and -2 Log-Likelihood (-2LL), on which lower values mean better-fitting

models. Although not used to select a final model, we also checked diagnostic criteria, such as entropy, average latent class probability, bootstrapped likelihood ratio test, and class size (Weller et al., 2020).

After selecting a model, we assigned people to one of the identified classes by the highest membership probability. We then used the classes as predictors of retirement adjustment, running separate and gender-split linear regression analyses on the four outcomes. These regressions were executed in Stata and considered respondents' nesting within organizations where they worked at baseline, with robust standard errors clustered at the organization level. As sensitivity, we also checked these regressions with control variables, which replicated the current results (see Table D1 in the Appendix D).

5.5 Results

Identifying Life Courses

Table 5.1 shows the prevalence of the life course events between ages 20-59. Employer and occupation changes are common at younger ages, with around 30% of people changing employers in their 20s and 30s. Unemployment and self-employment are rare, affecting fewer than 10% of individuals at any age. The likelihood of being unpartnered and severe health problems increases with age, although volunteering remains stable at approximately 25% across different life stages. There are clear gender disparities in caregiving. One in three women stops working for children in their 20s, and one in five in their 30s, but almost no man does so. Long-term caregiving is also primarily undertaken by women, with nearly one in four providing care in their 50s compared to 6.3% of men. This implies that women combine unpaid and paid work more than men do, which seems to hurt women's career progression, as men get promoted more in their 30s and 40s, while women undergo more demotion at the same ages.

These events were indicators in the LCA models. Fit indices across models are given in Table 5.2 and display similar trends among both genders. The largest drop in indices was from the two- to three-class model. Going to four classes improved the model fit, with decreases in the indices. Although AIC, SABIC, and -2LL kept decreasing from four to five classes, BIC, which is considered the most reliable fit index in LCA (Nylund et al., 2007), increased among men, suggesting that four classes are optimal for men. For women, BIC remained unchanged in five classes, but entropy worsened, and the fifth class was not easily distinguishable from the fourth class. Therefore, for both genders, we adopted a four-class solution, which had better statistical fit and theoretical clarity than the five-class solutions.

Figure 5.1, left panel, depicts the four classes for men. Men in Class 1 (55.4%) show some mobility early in life, but increasing stability later on, especially in the work domain. They move between employers until their 30s and get promoted until 40s. Job changes and joblessness decrease from age 30 onwards. Other domains remain stable throughout the life course, with lasting partnerships, limited health and care demands, and no volunteering. This represents a *Traditional Male Life Course*.

Men in Class 2 (12.2%) display a different pattern, with late-life mobility. At ages 40-49, they receive promotions, change employers, and shift occupations. This is why we call them *Late-career Mobile Worker*. In other domains, they have similar trajectories to men with a traditional male life course. However, different from all other male groups, they have consistently rising unemployment.

Although the work, family, health, and care histories of men in Class 3 (21.5%) follow the traditional male life course pattern, the volunteering history exhibits a stark contrast. Volunteering begins between ages 20-29 with a probability of 0.68. From age 30 to 50, almost all men in this class become volunteers, as probabilities reach 0.90. The probability goes down to 0.81 at ages 50-59, which is still a considerable amount. Accordingly, we refer to these men as *Lifelong Volunteer*.

Table 5.1 Descriptive statistics

	Men (n = 2,321)		Women (n = 1,946)	
	%	*M (SD)*	%	*M (SD)*
Retirement adjustment				
Money/income		2.08 (0.98)		2.01 (0.98)
Social contacts		2.49 (1.00)		2.62 (1.09)
Societal prestige		1.73 (0.83)		1.79 (0.89)
Societal role fulfillment		2.05 (0.85)		2.20 (0.99)
Pre-retirement life course				
Promotion 20-29	17.10		10.70	
Promotion 30-39	34.90		14.40	
Promotion 40-49	33.20		20.60	
Promotion 50-59	16.60		17.70	
Demotion 20-29	0.50		0.70	
Demotion 30-39	1.00		2.70	
Demotion 40-49	3.20		4.50	
Demotion 50-59	13.50		9.40	
Stop work for child 20-29	0.30		34.90	
Stop work for child 30-39	0.60		21.30	
Unemployed 20-29	8.00		5.00	
Unemployed 30-39	5.60		6.70	
Unemployed 40-49	3.40		6.40	
Unemployed 50-59	3.40		3.20	
Employer change 20-29	32.50		25.60	
Employer change 30-39	30.50		30.10	
Employer change 40-49	26.60		31.70	
Employer change 50-59	16.90		17.90	
Occupation change 20-29	10.60		8.20	
Occupation change 30-39	12.00		12.80	
Occupation change 40-49	11.60		17.40	
Occupation change 50-59	9.60		10.50	
Self-employed 20-29	2.00		1.50	
Self-employed 30-39	2.70		3.20	
Self-employed 40-49	2.80		3.00	
Self-employed 50-59	2.40		2.40	
Unpartnered 20-29	2.50		4.00	
Unpartnered 30-39	5.40		10.10	
Unpartnered 40-49	5.80		11.20	

Table 5.1 (continued)

	Men (n = 2,321)		Women (n = 1,946)	
	%	*M(SD)*	%	*M(SD)*
Unpartnered 50-59	7.80		12.40	
Severe health problems 20-29	2.00		3.10	
Severe health problems 30-39	5.20		6.50	
Severe health problems 40-49	9.70		11.90	
Severe health problems 50-59	22.80		20.00	
Cared long-term 20-29	0.30		1.00	
Cared long-term 30-39	0.70		3.80	
Cared long-term 40-49	2.30		9.80	
Cared long-term 50-59	6.30		23.40	
Volunteer work 20-29	16.30		18.60	
Volunteer work 30-39	22.30		26.80	
Volunteer work 40-49	23.80		26.40	
Volunteer work 50-59	23.10		24.20	

Class 4 features men with the most dynamic and upward careers (10.9%). Hence, we name them *Career Maker*. They have the highest probabilities of promotions and employer and occupation changes across all ages. Nonetheless, this career success entails some challenges. These men confront unemployment and self-employment while tackling marital breakdown and health deterioration. Though not as much as lifelong volunteers, they also volunteer, which expands over time.

Figure 5.1, right panel, portrays the four classes of women. Class 1 (50.9%) includes women with the least mobility and most stability across all life domains. Although becoming unpartnered, having health problems, and providing care rise with age, these women have the lowest likelihood of these events. The most active part is quitting work for children between ages 20-29. This reflects the life of working women in today's world. Therefore, we call this class *Traditional Female Life Course*.

Quitting work for children is the most likely for women in Class 2 (9.9%). These women exit the labor market between ages 20-29 and 30-39. They re-enter later, hence dubbed *Re-entering Mother*, but come across many changes. At ages 40-49, they switch employers and occupations, with probabilities reaching 0.74. At the same period, they also become unemployed and unpartnered. Possibly because of the intensity of these changes, their volunteering drops sharply after age 40.

Women in Class 3 (21.3%) volunteer throughout the life course, with a probability of 0.96 at ages 40-49, implying that virtually all women in this class give to society. However, their giving is not limited to society. They also give to families through childcare and informal care, leading us to label them as *Lifelong Giver*. Relative to women with a traditional life course, lifelong givers have more promotions, changes, and breaks in their careers, while having similar patterns in family and health domains.

Women in Class 4 (17.9%) are the most work-oriented female group. They experience the most promotions, the fewest career breaks for children, and the highest self-employment. After re-entering mothers, they also have the highest likelihood of career changes, though with decreasing unemployment. This implies that they are successful in the labor market. Nevertheless, they are involved extensively in long-term caregiving. Thus, we call them *Work-Oriented Caregiver*.

Table 5.2 Fit indices and diagnostic criteria for latent class models from two to five classes

	Par.	-2LL	AIC	BIC	SABIC	Entropy	ALCP	BLRT (p)	Classes < 5%
Men (n = 2,321)									
2 classes	85	53,161.162	53,331.162	53,819.891	53,549.830	0.938	0.970	0.000	0
3 classes	128	52,153.488	52,409.489	53,145.457	52,738.777	0.855	0.877	0.000	0
4 classes	171	51,739.096	52,081.097	53,064.305	52,521.005	0.810	0.827	0.000	0
5 classes	214	51,428.758	51,856.757	53,087.205	52,407.286	0.832	0.840	0.000	0
Women (n = 1,946)									
2 classes	85	53,451.666	53,621.666	54,095.416	53,825.369	0.827	0.931	0.000	0
3 classes	128	52,691.610	52,947.609	53,661.021	53,254.362	0.773	0.835	0.000	0
4 classes	171	52,355.376	52,697.375	53,650.449	53,107.178	0.776	0.815	0.000	0
5 classes	214	52,027.860	52,455.861	53,648.596	52,968.713	0.751	0.823	0.000	0

Par. = Number of free parameters. -2LL = -2 log-likelihood. AIC = Akaike information criterion. BIC = Bayesian information criterion. SABIC = sample size-adjusted BIC. Larger values of entropy indicate better classification accuracy, with values around 0.800 deemed acceptable. ALCP refers to the smallest diagonal value of the average latent class probability, which shows how accurately the model predicts class membership; values between 0.800 and 0.900 are considered acceptable. BLRT (bootstrapped likelihood ratio test) demonstrate the difference in the model fit between the k-classes model and the k–1 classes model, where statistically significant p values suggest improvement to the model fit.

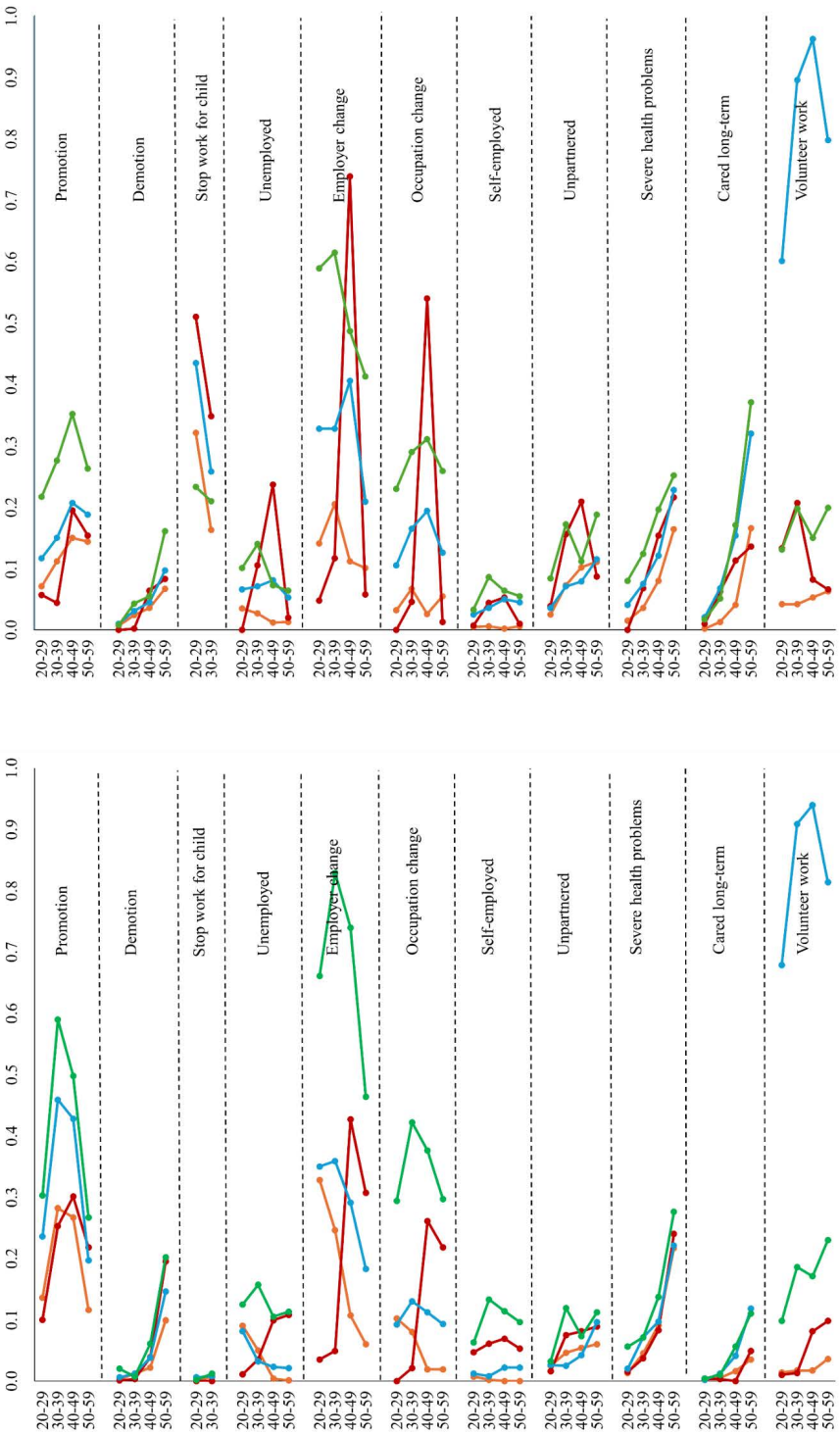


Figure 5.1 Probabilities of pre-retirement life course events from age 20 to 59 across four classes

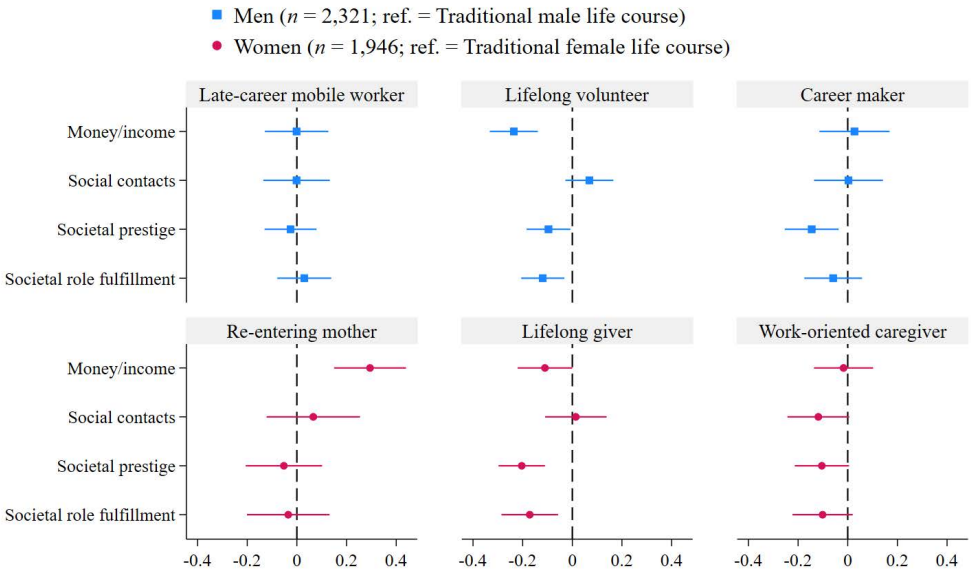
Predicting Retirement Adjustment

To assess the predictive value of the life course trajectories, we regressed them on the four retirement adjustment variables. Table 5.1 suggests that our sample, on average, adjusted well to retirement. The majority reported missing work-related aspects little or not at all. Social contacts via work were the most frequently missed aspect, with 47% of men and 51% of women reporting that they missed them fairly, much, or very much. Societal role fulfillment was missed by 37% of men and 42% of women, while income was missed less, with 29% of men and 28% of women indicating that they missed it to some extent. Societal prestige was missed the least, by 16% of men and 19% of women.

Figure 5.2 shows the regression coefficients. For men, *Late-career Mobile Workers* did not differ from those with a *Traditional Male Life Course* in any aspect of retirement adjustment. However, *Lifelong Volunteers* missed income, prestige, and role fulfillment less than men with a *Traditional Male Life Course*. This implies that they adjust better financially, socially, and psychologically. *Career Makers* also adjust better than men with a *Traditional Male Life Course*, albeit only socially, missing prestige less. To contrast all groups, we changed the reference category, which established the advantage of *Lifelong Volunteers*. They showed better financial adjustment than *Career Makers* and better financial and psychological adjustment than *Late-career Mobile Workers* (see Table D2 in the Appendix D).

For women, *Re-entering Mothers* missed income more than those with a *Traditional Female Life Course*, adjusting worse to retirement financially. Contrasting them with other groups affirmed their financial disadvantage. Both *Lifelong Givers* and *Work-Oriented Caregivers* missed income less than *Re-entering Mothers* (see Table D2 in the Appendix D). *Lifelong Givers* were financially most well-off, missing income less than both *Re-entering Mothers* and women with a *Traditional Female Life Course*. They also adjusted better socially and psychologically than women with a *Traditional Female Life Course*, missing prestige and role fulfillment less. As for *Work-Oriented Caregivers*, they did not differ from women with a *Traditional Female Life Course* in any aspect of retirement adjustment.

Figure 5.2 Regression coefficients of retirement adjustment variables, with 95% confidence intervals



5.6 Discussion

Previous studies left it unclear how life courses spanning multiple life stages and domains influence retirement adjustment. We addressed this gap by using more detailed indicators at the work-family interface while incorporating health, care, and volunteering experiences. This allowed us to present a panoramic view of life courses among Dutch older adults. To capture gender differences, we first constructed men's and women's trajectories and then examined these trajectories' relationship with retirement adjustment. In doing so, we employed a multidimensional and extended measurement of adjustment, focusing on how much retirees miss different aspects of work. As such, we provided one of the most comprehensive studies of retirement adjustment from a life course perspective.

We identified four distinct life course trajectories among both genders. Most men and women follow stable trajectories, with minimal mobility and adversity. Identifying these trajectories adds nuance to existing knowledge. Prior research showed that the typical trajectory for both genders includes full-time employment, marriage, and children (Firat et al., 2023). With variables on career mobility and family-related work interruptions, we saw that men forge more stable lives, whereas women gradually encounter more mobility over time. Representing the traditional male life course, men change employers and occupations less with age, with decreasing promotions in midlife. Women, however, switch employers until midlife, experience varying occupation changes, and receive promotions later, recovering from career breaks for children. This pattern illustrates the traditional female life course.

Although men and women differ in work stability and mobility, their civic participation is similar. One in five men and women develop trajectories that involve consistent volunteering and increasing caregiving. This finding advances research in three ways. First, earlier studies did not explore the development of caregiving and volunteering alongside work, family, and health. We filled this gap, showing that these activities, especially volunteering, are integral to life courses, with favorable work, family, and health conditions. Supporting continuity theory, our results suggest that there is continuity in volunteering (Atchley, 1989). It is often assumed that people start volunteering in retirement, and research shows that volunteering increases after retirement (Hämäläinen et al., 2024). However, we see that volunteering is a way of life for many individuals, as they volunteer throughout their lives.

Second, our findings confirm that caregiving is more dominant in women's lives, but challenges the idea that volunteering is a female domain. We found that volunteering is also central to men's lives, which exhibit the same pattern of volunteering as women, with both genders represented equally in trajectories marked by volunteering. This can be specific to the Dutch context, as studies showing that women volunteer more are usually from the United States, with more diverse gender patterns observed in Europe (Wilson, 2000). To better understand how volunteering unfolds alongside work, family, health, and caregiving among men and women, future research may conduct cross-national studies.

Third, we offer new insights into volunteering's role in retirement adjustment. It is known that volunteering helps retirement adjustment, but we studied it as part of entire trajectories across other life domains. Whereas volunteering co-occurs with caregiving among women, and upward careers are more prevalent among men, men and women with civic participation adjust similarly to the loss of work roles. They miss income, prestige, and role fulfillment less than their counterparts with traditional trajectories. They also adjust better than those with other trajectories, being the most advantaged groups. This supports role substitution and resource accumulation theories, implying that career success, a stable family, and good health foster resources, while caring and volunteering offset the loss of work roles (Mutchler et al., 2003; Wang et al., 2011). Yet, it remains an open question for future research whether civic participation, or its associated values, facilitates retirement adjustment.

Women who had the highest probability of stopping work for children also had the highest probability of being mobile in the labor market, but later in life. These mothers had struggles when they re-entered employment. Reflecting the scarring effect of breaks for childcare, they became unemployed. At the same time, they changed employers and occupations frequently, which coincided with divorce, signaling that work instability spills over into the family. As a result of these work-family disruptions, these mothers experience financial hardship in retirement, having lower pensions and household incomes. This makes them the most disadvantaged group, missing income the most, demonstrating a process of cumulative disadvantage (Dannefer, 2003).

The study conducted in this chapter is not without limitations. First, while retrospective data allowed us to examine past lives, it is subject to recall bias, and because it is self-reported, it is also prone to some social desirability bias. For a more accurate assessment, future research could benefit from prospective or administrative life course data. However, it takes a long time to gather such data, posing significant challenges of feasibility. Second, our life course measure covered multiple domains but recorded whether an event occurred within a decade. Although this broad timeframe may have helped recall accuracy by reducing cognitive load, a yearly measure would offer finer insights into the timing, duration, and order of events. Third, our sample comprised people working at older ages. This likely explains the absence of groups with purely disadvantageous trajectories. While our sample has disadvantageous transitions or periods, involving unemployment and disability, there is no trajectory defined exclusively by these adversities. Those struggling with long-term unemployment and disability probably dropped out earlier. Another reason is that our data comes from the Netherlands, a country providing generous welfare benefits against adversities. The increasing labor shortages in the past decades make spells of long-term unemployment unlikely. Cross-national studies are needed to examine how country-level characteristics influence life courses and retirement adjustment, including more diverse populations.

Despite these limitations, this chapter advances the understanding of how men's and women's life courses evolve before retirement and how they shape the experience of missing various aspects of work after retirement. Our findings from this chapter highlight the importance of recognizing the complex interplay of work, family, health, care, and volunteering trajectories over time, as these trajectories determine how people adapt to retirement. Therefore, we invite researchers to further explore these dynamics to support retirees' well-being in the context of aging populations and pension reforms.

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Appendices

Appendix A – Chapter 2

Construction of Work Trajectories

When a respondent simultaneously declared paid work, unpaid work and not working, we prioritized unpaid work and not working. In both SHARELIFE waves, respondents indicated whether a job spell was always full-time, part-time, or involved (multiple) changes between full- and part-time work. We used this information to distinguish working hours. In the first wave, respondents could report changes in working hours within the same job spell. Thus, we could capture all changes within the same job spell in the first wave. However, in the second wave, this option was not offered. Hence, we did the following for the second wave: if a respondent reported a change from part- to full-time, we considered this spell part-time. If they reported a change from full- to part-time, we considered this spell full-time. That is, we relied on the starting status. If multiple changes in working hours were reported, we did not code this spell (left it missing), as we had no clue about the starting status.

Before creating work states, we removed participants who did not report start or end dates, employment type and working hours of job spells. This approach prevented us from creating inaccurate sequences. After creating work states, we filled in some missing states in two steps. First, we filled in missing states corresponding to the years between 1939 and 1945 with a Second World War (WWII) gap. However, because the number of WWII gaps was low (n = 194 respondents, 480 person-years), we excluded respondents coded with this gap. Second, we created and included a missing state in the analysis for missing information up to 5 years (n = 2,854 respondents, 6,442 person-years). It is unlikely that this strategy has affected our findings because the number of missing states was small, accounting for only 0.23% of work states across all time points and respondents.

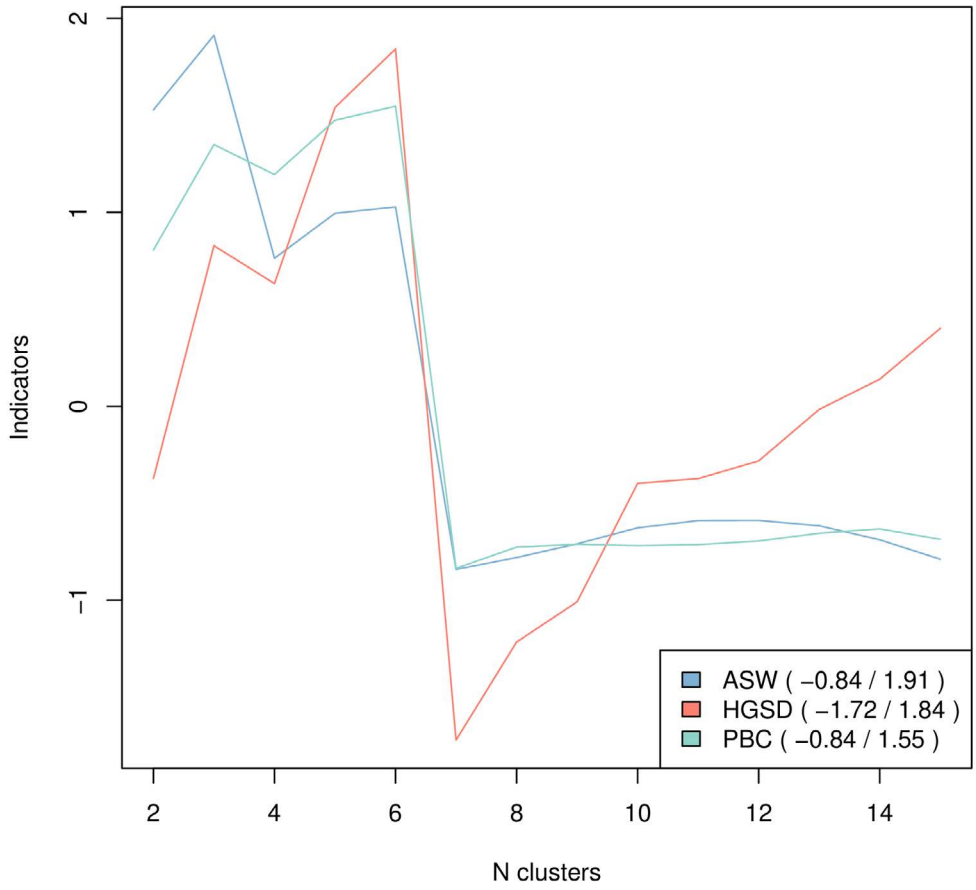
Construction of Family Trajectories

We combined marriage and cohabitation as partnered because cohabitation was uncommon for our study cohorts. Moreover, distinguishing between marriage and cohabitation would increase the number of states with the addition of parenthood, which could lead to unclear grouping of sequences in the cluster analysis. This is why we did not distinguish between divorce and widowhood either.

Before constructing family states, we removed respondents who did not report partnering episodes' start and/or end dates. This, again, protected us from forming inaccurate sequences. After constructing the family states, we deleted people with a missing state. Unlike the work trajectories, we did not use a missing state in family trajectories for two reasons. First, missingness in the family was lower (total n = 1,736, 1.89% of the original sample), making it less costly to drop. Second, it would have meant two additional states ("missing, children" and "missing, no children", or an additional state of "missing" that incorporates children and no children), which would increase the number of sequences and could lead to computer memory issues during the analysis.

We also addressed multiple partnering episodes within the same year. When an episode's start and ending happened in the same year, we moved the ending one year forward. If the old episode's ending and the new one's start occurred in the same year, we moved the new episode one year forward. We did not apply this strategy when such situations happened at the end of the trajectory, in which case the previous state was held.

Figure A1 Cut-off criteria for the Ward hierarchical clustering of multichannel sequence distances



Note: Because the scales for the ASW (Average Silhouette Width), HGSD (Hubert's Gamma Somers' D), and the PBC (Point Biserial Correlation) are different from one another, the values displayed in the figure are standardized (z-scores). Higher values indicate better cluster solutions.

Table A1.1 User-defined substitution cost matrix for transitions between work states (indel costs = 5)

	disability	full-time employment	missing	non-employment	part-time employment	self-employment	unemployment
disability	0	10	5	6	9	10	7
full-time employment	10	0	5	10	8	9	10
missing	5	5	0	5	5	5	5
non-employment	6	10	5	0	9	9	6
part-time employment	9	8	5	9	0	7	10
self-employment	10	9	5	9	7	0	10
unemployment	7	10	5	6	10	10	0

Table A1.2 User-defined substitution cost matrix for transitions between family states (indel costs = 5)

	partnered, children	partnered, no children	single, children	single, no children	unpartnered, children	unpartnered, no children
partnered, children	0	7	6	6	10	10
partnered, no children	7	0	6	6	10	10
single, children	6	6	0	6	5	5
single, no children	6	6	6	0	5	5
unpartnered, children	10	10	5	5	0	7
unpartnered, no children	10	10	5	5	7	0

Table A2 Frequencies (row percentages) of work-family trajectories by gender, educational level, birth cohort, and welfare regime

	full-time worker, partnered parent (n = 43,615)	non-worker, partnered parent (n = 12,031)	full-time worker, childless single/ couple (n = 7,793)	self-employed, partnered parent (n = 6,391)	part-time worker, partnered parent (n = 4,071)	full-time worker, unpartnered parent (n = 3,611)
Gender						
Female	44.99	94.68	46.41	39.65	89.49	71.20
Male	55.01	5.32	53.59	60.35	10.51	28.80
Educational level						
Low educated	30.79	65.49	32.50	48.22	31.88	27.33
Moderate educated	44.98	26.97	42.38	32.56	43.55	47.41
High educated	24.23	7.54	25.11	19.21	24.56	25.26
Birth cohort						
Younger cohort	61.71	46.90	60.72	56.77	70.52	70.15
Older cohort	38.29	53.10	39.28	43.23	29.48	29.85
Welfare regime						
Southern European	16.06	39.84	20.34	36.99	9.09	6.73
Social-democratic	11.94	4.78	11.48	11.13	22.11	14.23
Eastern European	34.36	16.37	22.43	16.96	6.31	28.88
Conservative	24.09	35.64	34.49	31.34	57.18	29.69
Liberal	0.57	1.70	0.76	1.14	1.01	0.47
Baltic	12.99	1.67	10.50	2.44	4.30	19.99

Table A3 Frequencies (column percentages) of work-family trajectories across the countries within welfare regimes

	full-time worker, partnered parent	non-worker, partnered parent	full-time worker, childless single/ couple	self-employed, partnered parent	part-time worker, partnered parent	full-time worker, unpartnered parent
Southern European (n = 16,358)	***42.81***	***29.30***	***9.69***	***14.45***	***2.26***	***1.49***
Cyprus (*n* = 1,090)	52.84	29.63	3.49	10.18	2.29	1.56
Greece (*n* = 3,470)	32.42	32.65	8.79	23.43	0.92	1.79
Italy (*n* = 4,939)	44.50	27.70	9.41	13.61	3.16	1.62
Malta (*n* = 1,137)	29.46	43.89	17.85	6.07	2.29	0.44
Portugal (*n* = 1,004)	61.16	17.13	9.66	8.76	1.49	1.79
Spain (*n* = 4,718)	45.68	27.51	10.11	12.95	2.46	1.29
Social-democratic (n = 8,801)	***59.15***	***6.53***	***10.17***	***8.08***	***10.23***	***5.84***
Denmark (*n* = 3,601)	56.48	7.44	9.91	9.03	11.91	5.22
Finland (*n* = 1,706)	65.12	5.04	10.84	8.73	3.28	6.98
Sweden (*n* = 3,494)	58.99	6.33	10.10	6.78	11.88	5.92
Eastern European (n = 21,086)	***71.07***	***9.34***	***8.29***	***5.14***	***1.22***	***4.95***
Bulgaria (*n* = 1,729)	75.01	4.22	11.16	2.78	1.74	5.09
Croatia (*n* = 1,992)	65.86	19.78	7.28	2.86	0.60	3.61
Czechia (*n* = 4,453)	78.71	1.59	7.07	2.25	2.11	8.26
Hungary (*n* = 1,351)	77.13	5.40	8.07	3.03	1.04	5.33
Poland (*n* = 4,728)	62.86	11.19	6.09	14.42	1.54	3.89
Romania (*n* = 1,746)	65.69	21.13	6.87	1.60	0.92	3.78
Slovakia (*n* = 1,901)	74.54	3.89	14.94	2.63	0.47	3.52
Slovenia (*n* = 3,186)	71.97	12.12	9.23	2.45	0.28	3.95
Conservative (n = 22,884)	***45.91***	***18.74***	***11.75***	***8.75***	***10.17***	***4.68***

Table A3 (continued)

	full-time worker, partnered parent	non-worker, partnered parent	full-time worker, childless single/ couple	self-employed, partnered parent	part-time worker, partnered parent	full-time worker, unpartnered parent
Austria (n = 3,244)	45.68	18.87	11.56	10.30	7.31	6.29
Belgium (n = 5,494)	47.34	18.67	12.65	8.57	7.72	5.04
France (n = 4,007)	49.84	17.59	10.56	9.68	6.41	5.91
Germany (n = 4,392)	52.98	13.98	10.52	6.53	12.07	3.92
Luxembourg (n = 1,122)	46.17	23.80	12.66	6.60	6.68	4.10
Switzerland (n = 2,653)	33.55	20.13	13.87	11.38	17.94	3.13
The Netherlands (n = 1,972)	34.99	26.88	11.31	7.45	16.68	2.69
Liberal (Ireland; n = 645)	***38.76***	***31.78***	***9.15***	***11.32***	***6.36***	***2.64***
Baltic (n = 7,738)	***73.22***	***2.60***	***10.57***	***2.02***	***2.26***	***9.33***
Estonia (n = 4,458)	74.34	1.75	10.57	2.53	2.33	8.48
Latvia (n = 1,438)	71.49	2.85	11.89	0.97	1.18	11.61
Lithuania (n = 1,842)	71.88	4.45	9.55	1.57	2.93	9.61

Table A4 Multinomial logistic regression analysis of work-family trajectories ($N = 77{,}512$), average marginal effects

	full-time worker, partnered parent	non-worker, partnered parent	full-time worker, childless single/ couple	self-employed, partnered parent	part-time worker, partnered parent	full-time worker, unpartnered parent
Gender						
Female	-0.250***	0.239***	-0.037***	-0.054***	0.074***	0.028***
Male	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Educational level						
Low educated	-0.137***	0.141***	-0.023***	0.020	0.004	-0.006
Moderate educated	-0.058***	0.059***	-0.009	-0.003	0.011*	0.000
High educated	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Birth cohort						
Younger cohort	-0.001	-0.047***	0.002	0.000	0.028***	0.017***
Older cohort	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Welfare regime						
Southern European	0.018	0.057*	-0.010	0.047*	-0.081***	-0.031***
Social-democratic	0.119***	-0.115***	-0.017**	-0.007	0.009	0.012*
Eastern European	0.264***	-0.101***	-0.033**	-0.036	-0.094***	0.000
Liberal	-0.072**	0.134***	-0.026***	0.024***	-0.038*	-0.021***
Baltic	0.285***	-0.166***	-0.010	-0.067***	-0.084***	0.041***
Conservative	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (two-tailed).

Table A5 Multinomial logistic regression analysis of work-family trajectories among men (n = 34,132) and women (n = 43,380), average marginal effects

	full-time worker, partnered parent		non-worker, partnered parent		full-time worker, childless single/ couple		self-employed, partnered parent		part-time worker, partnered parent		full-time worker, unpartnered parent	
	men	women	men	women	men	women	men	women	men	women	men	women
Educational level												
Low educated	**-0.065*****	**-0.181*****	**0.021*****	**0.236*****	**0.014**	**-0.060*****	0.028*	0.012	-0.001	0.006	**0.002**	**-0.014****
Moderate educated	**-0.016**	**-0.083*****	**0.002**	**0.104*****	**0.011**	**-0.032*****	0.001	-0.006	**-0.003**	**0.021****	0.004	-0.004
High educated	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Birth cohort												
Younger cohort	**-0.062*****	**0.052****	**0.006*****	**-0.091*****	**0.022*****	**-0.016*****	0.005	-0.002	0.010***	0.042***	**0.019*****	**0.015*****
Older cohort	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Welfare regime												
Southern European	-0.029	0.047	**0.001**	**0.105****	-0.021	-0.001	**0.086***	**0.018**	**-0.009***	**-0.137*****	-0.028***	-0.033***
Social-democratic	**0.014**	**0.202*****	**-0.005***	**-0.201*****	-0.015*	-0.021**	**-0.001**	**-0.012**	0.003	0.015	0.005	0.017
Eastern European	**0.110*****	**0.381*****	**0.010**	**-0.186*****	-0.047***	-0.022*	-0.051*	-0.024	**-0.010***	**-0.160*****	**-0.013****	**0.011**
Liberal	-0.080***	-0.064*	0.030***	0.216***	-0.029***	-0.029***	**0.086*****	**-0.021****	**0.002**	**-0.071****	**-0.009*****	**-0.029*****
Baltic	**0.105*****	**0.425*****	**0.004**	**-0.297*****	**-0.037*****	**0.007**	**-0.081*****	**-0.053*****	**-0.001**	**-0.147*****	**0.010***	**0.065*****
Conservative	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.

$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$ (two-tailed). **Bold** coefficients indicate a statistically significant difference in effects for men and women based on logistic regressions.

Table A6 Multinomial logistic regression analysis of work-family trajectories ($N = 77{,}512$), multinomial logit coefficients (B) with robust standard errors (RSE) clustered at the country level

	non-worker, partnered parent vs. full-time worker, partnered parent		full-time worker, childless single/couple vs. full-time worker, partnered parent		self-employed, partnered parent vs. full-time worker, partnered parent		part-time worker, partnered parent vs. full-time worker, partnered parent		full-time worker, unpartnered parent vs. full-time worker, partnered parent	
	B	*RSE*	*B*	*RSE*	*B*	*RSE*	*B*	*RSE*	*B*	*RSE*
Gender										
Female	3.341***	0.227	0.147	0.076	-0.028	0.087	2.549***	0.185	1.089***	0.055
Male	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Educational level										
Low educated	1.711***	0.110	0.055	0.068	0.538***	0.126	0.570***	0.084	0.172*	0.068
Moderate educated	0.865***	0.085	0.030	0.052	0.084	0.072	0.424***	0.101	0.132**	0.048
High educated	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Birth cohort										
Younger cohort	-0.388***	0.100	0.022	0.051	-0.014	0.090	0.557***	0.094	0.402***	0.055
Older cohort	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Welfare regime										
Southern European	0.205	0.229	-0.136	0.143	0.396	0.243	-1.542***	0.265	-1.115***	0.140
Social-democratic	-1.356***	0.221	-0.404***	0.086	-0.330*	0.165	-0.295	0.321	-0.077	0.086
Eastern European	-1.517***	0.357	-0.814***	0.130	-1.000*	0.490	-2.937***	0.312	-0.588***	0.151
Liberal	0.961***	0.122	-0.071	0.082	0.425***	0.100	-0.124	0.215	-0.334***	0.082
Baltic	-2.794***	0.329	-0.605***	0.097	-1.910***	0.201	-2.342***	0.258	-0.002	0.108
Conservative	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Intercept	-4.135***	0.191	-1.460***	0.099	-1.830***	0.108	-3.900***	0.259	-3.185***	0.101

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (two-tailed).

Table A7 Multinomial logistic regression analysis of work-family trajectories among men ($n = 34{,}132$), multinomial logit coefficients (B) with robust standard errors (RSE) clustered at the country level

	non-worker, partnered parent vs. full-time worker, partnered parent		full-time worker, childless single/couple vs. full-time worker, partnered parent		self-employed, partnered parent vs. full-time worker, partnered parent		part-time worker, partnered parent vs. full-time worker, partnered parent		full-time worker, unpartnered parent vs. full-time worker, partnered parent	
	B	*RSE*	*B*	*RSE*	*B*	*RSE*	*B*	*RSE*	*B*	*RSE*
Educational level										
Low educated	1.178***	0.215	0.214*	0.085	0.340**	0.118	0.047	0.173	0.172	0.112
Moderate educated	0.223	0.159	0.116	0.069	0.029	0.087	-0.180	0.111	0.168	0.110
High educated	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Birth cohort										
Younger cohort	0.429***	0.117	0.271***	0.054	0.130	0.080	0.966***	0.200	0.800***	0.062
Older cohort	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Welfare regime										
Southern European	0.078	0.232	-0.116	0.156	0.611*	0.245	-0.679**	0.256	-1.214***	0.156
Social-democratic	-0.416	0.240	-0.133	0.068	-0.028	0.139	0.120	0.244	0.094	0.109
Eastern European	0.329	0.265	-0.541***	0.117	-0.751	0.387	-1.038**	0.356	-0.574***	0.147
Liberal	1.189***	0.068	-0.093	0.067	0.697***	0.086	0.249	0.220	-0.141*	0.071
Baltic	0.070	0.222	-0.440***	0.085	-1.416***	0.214	-0.192	0.229	0.091	0.110
Conservative	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Intercept	-4.582***	0.175	-1.816***	0.087	-1.989***	0.093	-4.275***	0.240	-3.519***	0.099

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (two-tailed).

Table A8 Multinomial logistic regression analysis of work-family trajectories among women (n = 43,380), multinomial logit coefficients (B) with robust standard errors (RSE) clustered at the country level

	non-worker, partnered parent vs. full-time worker, partnered parent		full-time worker, childless single/couple vs. full-time worker, partnered parent		self-employed, partnered parent vs. full-time worker, partnered parent		part-time worker, partnered parent vs. full-time worker, partnered parent		full-time worker, unpartnered parent vs. full-time worker, partnered parent	
	B	*RSE*	*B*	*RSE*	*B*	*RSE*	*B*	*RSE*	*B*	*RSE*
Educational level										
Low educated	1.779***	0.121	-0.154*	0.063	0.780***	0.151	0.648***	0.097	0.147*	0.072
Moderate educated	0.918***	0.099	-0.091	0.068	0.143	0.078	0.498***	0.108	0.103*	0.049
High educated	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Birth cohort										
Younger cohort	-0.583***	0.116	-0.323***	0.046	-0.238*	0.114	0.380***	0.098	0.163**	0.059
Older cohort	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Welfare regime										
Southern European	0.167	0.267	-0.158	0.177	0.106	0.271	-1.690***	0.311	-1.078***	0.183
Social-democratic	-1.585***	0.252	-0.818***	0.137	-0.799**	0.234	-0.482	0.357	-0.280*	0.116
Eastern European	-1.804***	0.377	-1.147***	0.178	-1.368*	0.623	-3.355***	0.335	-0.701***	0.176
Liberal	0.879***	0.169	-0.105	0.137	-0.043	0.180	-0.241	0.252	-0.505***	0.121
Baltic	-3.276***	0.375	-0.871***	0.148	-2.503***	0.224	-2.798***	0.295	-0.153	0.136
Conservative	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Intercept	-0.592**	0.188	-0.788***	0.146	-1.570***	0.200	-1.139***	0.273	-1.814***	0.157

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (two-tailed).

Table A9 Multilevel multinomial logistic regression analysis of work-family trajectories (N = 77,512), multinomial logit coefficients (B) and standard errors (SE) with shared random effects at the country level

	non-worker, partnered parent vs. full-time worker, partnered parent		full-time worker, childless single/couple vs. full-time worker, partnered parent		self-employed, partnered parent vs. full-time worker, partnered parent		part-time worker, partnered parent vs. full-time worker, partnered parent		full-time worker, unpartnered parent vs. full-time worker, partnered parent	
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Gender										
Female	3.370***	0.043	0.174***	0.025	-0.001	0.028	2.573***	0.053	1.113***	0.039
Male	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Educational level										
Low educated	1.733***	0.042	0.086*	0.035	0.577***	0.039	0.592***	0.049	0.194***	0.051
Moderate educated	0.826***	0.043	-0.004	0.032	0.046	0.039	0.393***	0.045	0.106*	0.044
High educated	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Birth cohort										
Younger cohort	-0.387***	0.026	0.021	0.026	-0.008	0.029	0.564***	0.039	0.395***	0.040
Older cohort	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Welfare regime										
Southern European	0.086	0.194	-0.275	0.195	0.262	0.195	-1.672***	0.201	-1.248***	0.206
Social-democratic	-1.481***	0.243	-0.525*	0.241	-0.448	0.242	-0.419	0.242	-0.200	0.244
Eastern European	-1.610***	0.181	-0.913***	0.181	-1.100***	0.183	-3.039***	0.191	-0.690***	0.184
Liberal	0.888*	0.385	-0.143	0.396	0.354	0.392	-0.200	0.408	-0.407	0.447
Baltic	-2.833***	0.250	-0.637**	0.242	-1.941***	0.252	-2.382***	0.251	-0.040	0.243
Conservative	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Intercept	-4.079***	0.142	-1.400***	0.135	-1.779***	0.136	-3.842***	0.147	-3.121***	0.142
Random effects										
	B	*SE*	95% Confidence Interval							
Country-level variance	0.118	0.032	[0.069, 0.202]							

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (two-tailed).

Table A10 Multilevel multinomial logistic regression analysis of work-family trajectories among men ($n = 34{,}132$), multinomial logit coefficients (B) and standard errors (SE) with shared random effects at the country level

	non-worker, partnered parent vs. full-time worker, partnered parent		full-time worker, childless single/couple vs. full-time worker, partnered parent		self-employed, partnered parent vs. full-time worker, partnered parent		part-time worker, partnered parent vs. full-time worker, partnered parent		full-time worker, unpartnered parent vs. full-time worker, partnered parent	
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Educational level										
Low educated	1.212***	0.128	0.250***	0.049	0.391***	0.050	0.078	0.133	0.197*	0.093
Moderate educated	0.201	0.134	0.097*	0.045	0.011	0.050	-0.197	0.120	0.151	0.081
High educated	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Birth cohort										
Younger cohort	0.440***	0.086	0.278***	0.036	0.145***	0.037	0.973***	0.117	0.803***	0.075
Older cohort	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Welfare regime										
Southern European	-0.016	0.187	-0.230	0.151	0.496**	0.150	-0.789***	0.212	-1.324***	0.192
Social-democratic	-0.412	0.250	-0.136	0.184	-0.029	0.185	0.114	0.223	0.089	0.199
Eastern European	0.301	0.171	-0.576***	0.140	-0.784***	0.143	-1.078***	0.199	-0.614***	0.157
Liberal	1.187**	0.414	-0.098	0.338	0.692*	0.315	0.244	0.536	-0.147	0.476
Baltic	0.068	0.241	-0.442*	0.189	-1.419***	0.210	-0.196	0.242	0.089	0.203
Conservative	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Intercept	-4.600***	0.170	-1.826***	0.107	-2.011***	0.109	-4.284***	0.169	-3.522***	0.134
Random effects										
	B	*SE*	95% Confidence Interval							
Country-level variance	0.064	0.019	[0.036, 0.114]							

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (two-tailed).

Table A11 Multilevel multinomial logistic regression analysis of work-family trajectories among women (n = 43,380), multinomial logit coefficients (B) and standard errors (SE) with shared random effects at the country level

	non-worker, partnered parent vs. full-time worker, partnered parent		full-time worker, childless single/couple vs. full-time worker, partnered parent		self-employed, partnered parent vs. full-time worker, partnered parent		part-time worker, partnered parent vs. full-time worker, partnered parent		full-time worker, unpartnered parent vs. full-time worker, partnered parent	
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Educational level										
Low educated	1.787***	0.046	-0.147**	0.052	0.789***	0.063	0.656***	0.054	0.151*	0.061
Moderate educated	0.865***	0.046	-0.130**	0.047	0.096	0.065	0.455***	0.050	0.074	0.054
High educated	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Birth cohort										
Younger cohort	-0.602***	0.029	-0.352***	0.039	-0.260***	0.046	0.373***	0.043	0.133**	0.047
Older cohort	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Welfare regime										
Southern European	-0.040	0.300	-0.377	0.303	-0.105	0.303	-1.909***	0.305	-1.296***	0.311
Social-democratic	-1.919***	0.372	-1.154**	0.374	-1.133**	0.376	-0.811*	0.371	-0.612	0.375
Eastern European	-2.066***	0.279	-1.407***	0.281	-1.633***	0.283	-3.625***	0.287	-0.969**	0.282
Liberal	0.631	0.586	-0.357	0.610	-0.294	0.625	-0.491	0.604	-0.755	0.662
Baltic	-3.466***	0.379	-1.065**	0.373	-2.696***	0.390	-2.987***	0.380	-0.348	0.373
Conservative	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Intercept	-0.318	0.208	-0.510*	0.208	-1.294***	0.213	-0.874***	0.210	-1.538***	0.212
Random effects										
	B	*SE*	95% Confidence Interval							
Country-level variance	0.284	0.078	[0.165, 0.487]							

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (two-tailed).

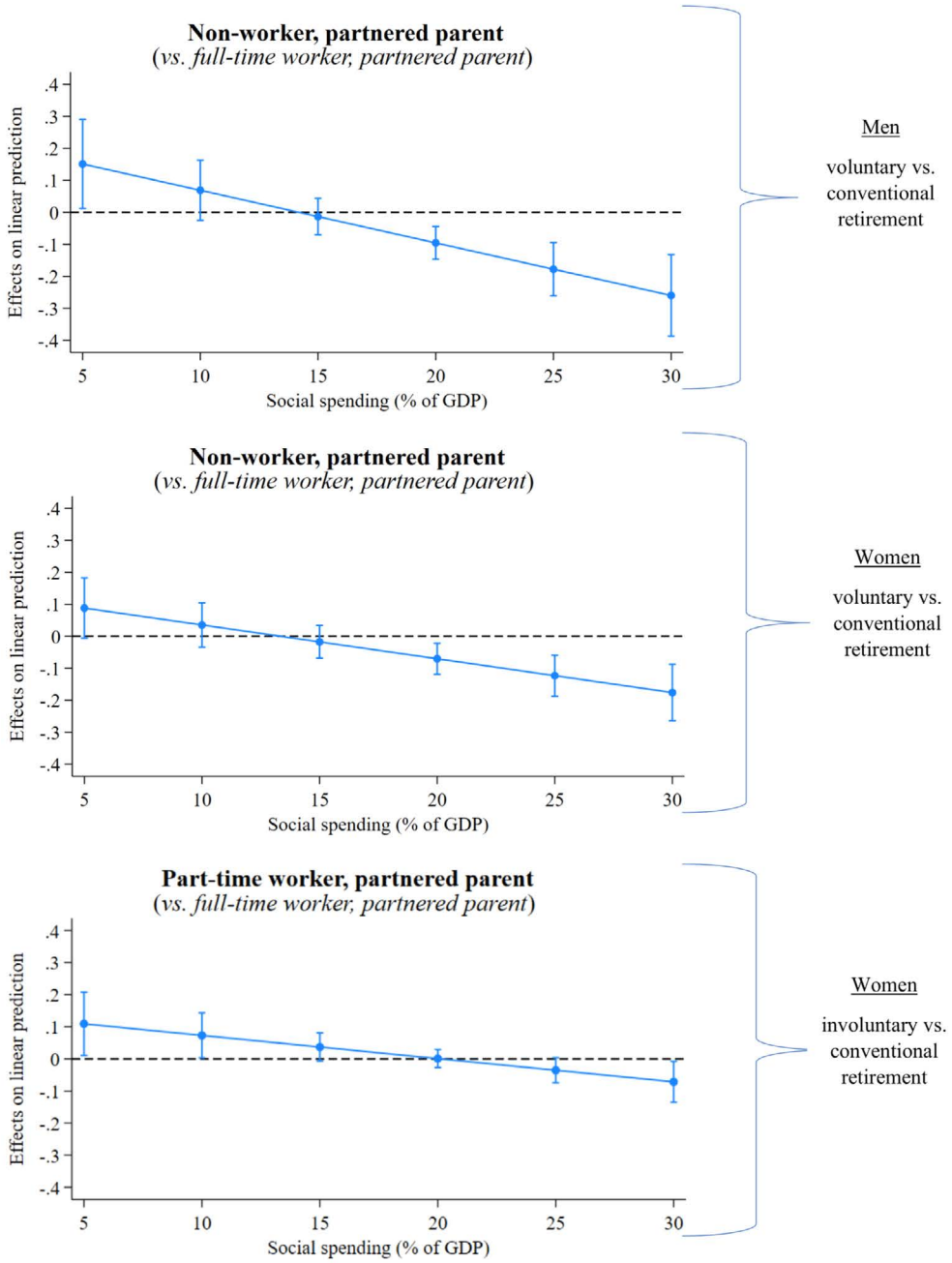
Table A12 Multinomial logistic regression analysis of work-family trajectories with four birth cohorts ($N = 77{,}512$), average marginal effects

	full-time worker, partnered parent	non-worker, partnered parent	full-time worker, childless single/ couple	self-employed, partnered parent	part-time worker, partnered parent	full-time worker, unpartnered parent
Gender						
Female	-0.249***	0.239***	-0.037***	-0.055***	0.073***	0.028***
Male	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Educational level						
Low educated	-0.137***	0.139***	-0.024***	0.020	0.007	-0.004
Moderate educated	-0.058***	0.059***	-0.010	-0.003	0.011*	0.000
High educated	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Birth cohort						
Before 1940	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
1940-1945	0.038***	-0.039***	-0.007	-0.019**	0.014***	0.012**
1946-1950	0.043***	-0.058***	-0.006	-0.018*	0.022***	0.017***
After 1950	0.003	-0.066***	0.001	-0.003	0.039***	0.025***
Welfare regime						
Southern European	0.017	0.059**	-0.010	0.047*	-0.082***	-0.031***
Social-democratic	0.118***	-0.114***	-0.017**	-0.007	0.008	0.012*
Eastern European	0.264***	-0.099***	-0.033**	-0.036	-0.095***	-0.001
Liberal	-0.074**	0.133***	-0.026***	0.025***	-0.037*	-0.021***
Baltic	0.286***	-0.165***	-0.010	-0.067***	-0.085***	0.041***
Conservative	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (two-tailed).

Appendix B – Chapter 3

Figure B1 Average marginal effects of work-family trajectories on retirement voluntariness among men and women by welfare state generosity, with 95% confidence intervals



A

Figure B2 Average marginal effects of work-family trajectories on involuntary versus voluntary retirement by welfare state generosity, with 95% confidence intervals

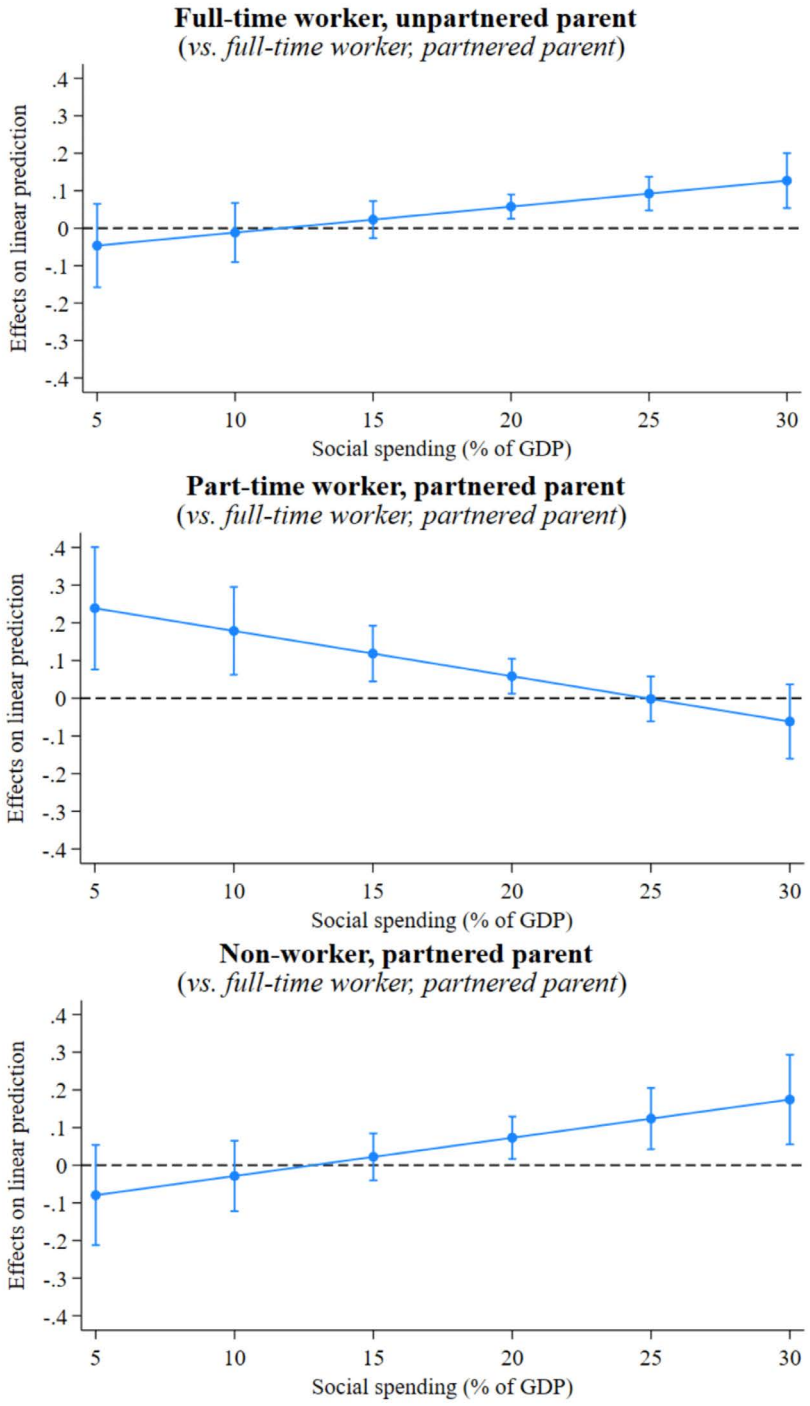


Figure B3 Average marginal effects of work-family trajectories on involuntary versus voluntary retirement among women by welfare state generosity, with 95% confidence intervals

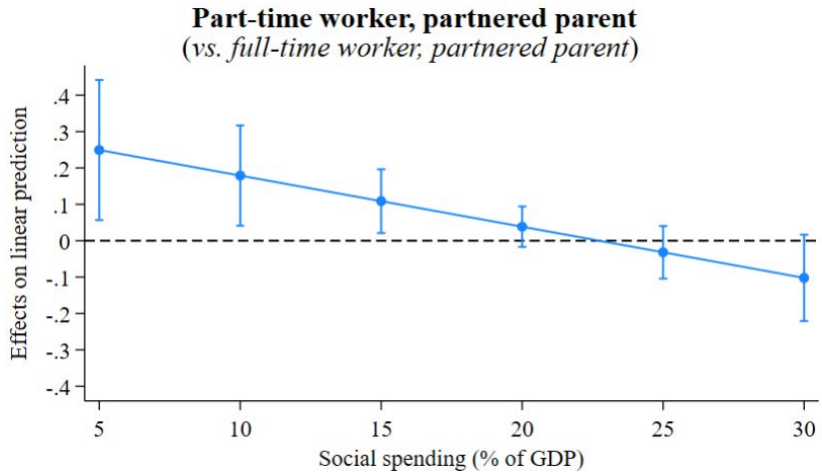


Table B1 Work-family trajectories and welfare state generosity across European countries.

		Work-family trajectories						Welfare state	
		Full-time worker, partnered parent	Full-time worker, unpartnered parent	Full-time worker, single/ 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

Table B1 (continued)

		Work-family trajectorie						Welfare state	
		Full-time worker, partnered parent	Full-time worker, unpartnered parent	Full-time worker, single/ childless couple	Part-time worker, partnered parent	Non-worker, partnered parent	Self-employed, partnered parent	Social spending (% of GDP)	
	N	%	%	%	%	%	%	*M*	*SD*
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

Sources: SHARE waves 3 and 7, OECD, and Eurostat.

Table B2 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*
Work-family trajectories																		
Full-time worker, unpartnered parent (vs. FT-PP)	-.034		.017	-.030		.022	.089		.091	-.005		.011	-.008		.011	.002		0.045
Full-time worker, single/ childless couple (vs. FT-PP)	-.004		.009	-.004		.009	.015		.036	.020	*	.009	.019		.010	-.023		0.040
Part-time worker, partnered parent (vs. FT-PP)	-.066	*	.027	-.068	*	.027	-.245	*	.117	.000		.010	-.020		.011	-.086		0.062
Non-worker, partnered parent (vs. FT-PP)	-.068	**	.024	-.078	**	.030	.233	*	.095	-.054	***	.008	-.050		.026	.141	*	0.063
Self-employed, partnered parent (vs. FT-PP)	-.061	***	.009	-.076	***	.019	-.104		.066	-.050	***	.012	-.056	*	.024	-.020		0.078
Educational level																		
Low-educated (vs. high-educated)	-.057	***	.008	-.057	***	.008	-.057	***	.008	-.057	***	.008	-.055	***	.008	-.055	***	0.008
Moderate-educated (vs. high-educated)	-.017	*	.007	-.015	*	.007	-.016	*	.007	-.032	***	.007	-.028	***	.007	-.027	***	0.007
Birth cohort																		
1940-1945 (vs. pre-1940)	.025	**	.008	.024	**	.008	.024	**	.008	.026	**	.008	.022	**	.008	.024	**	0.008
1946-1950 (vs. pre-1940)	.008		.009	.008		.009	.007		.009	.028	**	.008	.020	*	.008	.022	**	0.008
Post-1950 (vs. pre-1940)	.025	**	.009	.025	**	.009	.024	**	.009	.034	***	.009	.027	**	.009	.029	**	0.009

Table B2 (continued)

	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*
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, unpartnered parent (vs. FT-PP)							-.006		.005							-.001		.002
X Full-time worker, single/childless couple (vs. FT-PP)							-.001		.002							.002		.002
X Part-time worker, partnered parent (vs. FT-PP)							.009		.006							.003		.003
X Non-worker, partnered parent (vs. FT-PP)							-.016	**	.005							-.011	**	.003
X Self-employed, partnered parent (vs. FT-PP)							.001		.003							-.002		.004
Intercept	.307	***	.050	.305	***	.051	.297		.051	.372	***	.046	.354	***	.049	.333	***	.050
Slope variance																		
Full-time worker, unpartnered parent (vs. FT-PP)				.004	*	.003	.004	*	.003				.000		.000	.000		.000

Table B2 (continued)

	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*
Full-time worker, single/ childless couple (vs. FT-PP)			.000	*	.000	.000	*	.000			.000	*	.001	.000	*	.001
Part-time worker, partnered parent (vs. FT-PP)			.000		.000	.000		.000			.000	*	.001	.001	*	.001
Non-worker, partnered parent (vs. FT-PP)			.005	*	.005	.000	*	.000			.015	*	.005	.013	*	.004
Self-employed, partnered parent (vs. FT-PP)			.005	*	.002	.005	*	.002			.009	*	.004	.009	*	.004

Notes: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. For variances, * indicates that a 95% confidence interval does not include 0. FT-PP: full-time worker, partnered parent.

Sources: SHARE waves 3 and 7, OECD, and Eurostat.

Table B3 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*
Work-family trajectories																		
Full-time worker, unpartnered parent (vs. FT-PP)	.032		.017	.035		.023	-.074		.095	.025	*	.011	.024	*	.011	.001		.044
Full-time worker, single/childless couple (vs. FT-PP)	.021	*	.009	.021	*	.009	-.027		.038	.013		.010	.014		.012	.004		.047
Part-time worker, partnered parent (vs. FT-PP)	-.042		.028	-.043		.029	-.046		.129	-.001		.011	.000		.016	.145	*	.066
Non-worker, partnered parent (vs. FT-PP)	.058	*	.023	.059	*	.024	.132		.092	-.031	***	.008	.002		.023	.047		.061
Self-employed, partnered parent (vs. FT-PP)	-.050	***	.010	-.063	**	.018	-.043		.065	-.043	***	.012	-.062	***	.017	.018		.065
Educational level																		
Low-educated (vs. high-educated)	.081	***	.008	.081	***	.008	.080	***	.008	.051	***	.008	.050	***	.008	.050	***	.008
Moderate-educated (vs. high-educated)	.044	***	.008	.045	***	.008	.045	***	.008	.026	**	.008	.028	***	.008	.029	***	.008
Birth cohort																		
1940-1945 (vs. pre-1940)	.011		.008	.012		.008	.012		.008	.016	*	.008	.015		.008	.016	*	.008
1946-1950 (vs. pre-1940)	.011		.009	.011		.009	.011		.009	.026	**	.008	.023	**	.008	.025	**	.009
Post-1950 (vs. pre-1940)	.068	***	.009	.068	***	.009	.068	***	.009	.064	***	.009	.058	***	.009	.060	***	.009

Table B3 (continued)

	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*
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, unpartnered parent (vs. FT-PP)							.006		.005							.001	.002
X Full-time worker, single/childless couple (vs. FT-PP)							.002		.002							.001	.002
X Part-time worker, partnered parent (vs. FT-PP)							.000		.007							-.007	* .003
X Non-worker, partnered parent (vs. FT-PP)							-.004		.005							-.002	.003
X Self-employed, partnered parent (vs. FT-PP)							-.001		.003							-.004	.003
Intercept	.191	***	.036	.191	***	.037	.194	***	.037	.215	***	.036	.196	***	.037	.185	.038
Slope variance																	
Full-time worker, unpartnered parent (vs. FT-PP)				.005	*	.003	.005	*	.003				.000	*	.000	.000	* .000

Table B3 (continued)

	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*
Full-time worker, single/ childless couple (vs. FT-PP)			.000	.000	.000	.000			.001 *	.001	.001 *	.001
Part-time worker, partnered parent (vs. FT-PP)			.001 *	.005	.002 *	.006			.002 *	.002	.001 *	.001
Non-worker, partnered parent (vs. FT-PP)			.001 *	.004	.001 *	.004			.012 *	.005	.011 *	.005
Self-employed, partnered parent (vs. FT-PP)			.005 *	.002	.005 *	.002			.002 *	.002	.002 *	.002

Notes: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. For variances, * indicates that a 95% confidence interval does not include 0. FT-PP: full-time worker, partnered parent.

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

Table B4 Multilevel regression analysis of involuntary versus voluntary retirement (N= 17,350).

	Model 1			Model 2			Model 3		
	B		*SE*	*B*		*SE*	*B*		*SE*
Work-family trajectories									
Full-time worker, unpartnered parent (vs. FT-PP)	.060	***	.016	.061	***	.016	-.081		.074
Full-time worker, single/childless couple (vs. FT-PP)	.022		.011	.021		.011	.019		.051
Part-time worker, partnered parent (vs. FT-PP)	.026		.015	.037		.019	.299	**	.107
Non-worker, partnered parent (vs. FT-PP)	.038	**	.014	.054	*	.027	-.130		.090
Self-employed, partnered parent (vs. FT-PP)	.013		.015	.010		.023	.148		.096
Female (vs. male)	-.004		.008	-.003		.008	-.003		.008
Educational level									
Low-educated (vs. high-educated)	.162	***	.010	.163	***	.010	.162	***	.010
Moderate-educated (vs. high-educated)	.075	***	.009	.076	***	.009	.075	***	.009
Birth cohort									
1940-1945 (vs. pre-1940)	-.031	**	.010	-.031	**	.010	-.031	**	.010
1946-1950 (vs. pre-1940)	-.027	*	.012	-.027	*	.012	-.026	*	.012
Post-1950 (vs. pre-1940)	.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, unpartnered parent (vs. FT-PP)							.007	*	.004
X Full-time worker, single/childless couple (vs. FT-PP)							.000		.003
X Part-time worker, partnered parent (vs. FT-PP)							-.012	*	.005
X Non-worker, partnered parent (vs. FT-PP)							.010	*	.005
X Self-employed, partnered parent (vs. FT-PP)							-.007		.005
Intercept	.283	***	.056	.278	***	.057	.291	***	.058
Slope variance									
Full-time worker, unpartnered parent (vs. FT-PP)				.000		.000	.000		.000
Full-time worker, single/childless couple (vs. FT-PP)				.000	*	.000	.000	*	.000
Part-time worker, partnered parent (vs. FT-PP)				.001	*	.002	.003	*	.003
Non-worker, partnered parent (vs. FT-PP)				.012	*	.005	.013	*	.006
Self-employed, partnered parent (vs. FT-PP)				.005	*	.003	.004	*	.003

Notes: *p < .05, **p < .01, ***p < .001. For variance components, * indicates that a 95% confidence interval does not include 0. FT-PP: full-time worker, partnered parent.

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

Table B5 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*
Work-family trajectories																		
Full-time worker, unpartnered parent (vs. FT-PP)	.079	**	.028	.079	**	.029	-.101		.143	.047	*	.020	.049	*	.020	-.012		.091
Full-time worker, single/ childless couple (vs. FT-PP)	.032	*	.015	.032	*	.015	-.011		.067	.000		.018	-.004		.018	.041		.080
Part-time worker, partnered parent (vs. FT-PP)	.013		.047	.013		.047	.339		.242	.001		.017	.020		.025	.320	*	.127
Non-worker, partnered parent (vs. FT-PP)	.174	***	.043	.174	***	.043	-.062		.185	.014		.016	.035		.029	-.095		.101
Self-employed, partnered parent (vs. FT-PP)	.017		.019	.017		.021	.183		.103	.006		.025	-.018		.039	.048		.156
Educational level																		
Low-educated (vs. high-educated)	.170	***	.014	.170	***	.014	.169	***	.014	.158	***	.015	.158	***	.014	.158	***	.014
Moderate-educated (vs. high-educated)	.069	***	.013	.069	***	.013	.069	***	.013	.082	***	.014	.085	***	.014	.084	***	.014
Birth cohort																		
1940-1945 (vs. pre-1940)	-.032	*	.014	-.032	*	.014	-.031	*	.014	-.033	*	.015	-.035	*	.015	-.035	*	.015
1946-1950 (vs. pre-1940)	-.020		.016	-.020		.016	-.019		.016	-.034	*	.017	-.035	*	.017	-.033	*	.017
Post-1950 (vs. pre-1940)	.043	**	.016	.043	**	.016	.044	**	.016	.020		.017	.017		.017	.019		.017

Table B5 (continued)

	Men						Women					
	Model 1			Model 1			Model 1			Model 1		
	B		*SE*	*B*		*SE*	*B*		*SE*	*B*		*SE*
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, unpartnered parent (vs. FT-PP)							.009		.007							.003		.004
X Full-time worker, single/childless couple (vs. FT-PP)							.002		.003							-.002		.004
X Part-time worker, partnered parent (vs. FT-PP)							-.015		.011							-.014	*	.006
X Non-worker, partnered parent (vs. FT-PP)							.013		.010							.007		.005
X Self-employed, partnered parent (vs. FT-PP)							-.008		.005							-.003		.008
Intercept	.369	***	.071	.370	***	.071	.371	***	.072	.274	***	.067	.257	***	.068	.267	***	.072
Slope variance												
Full-time worker, unpartnered parent (vs. FT-PP)				.000	*	.004	.002	*	.005				.000	*	.000	.000	*	.000

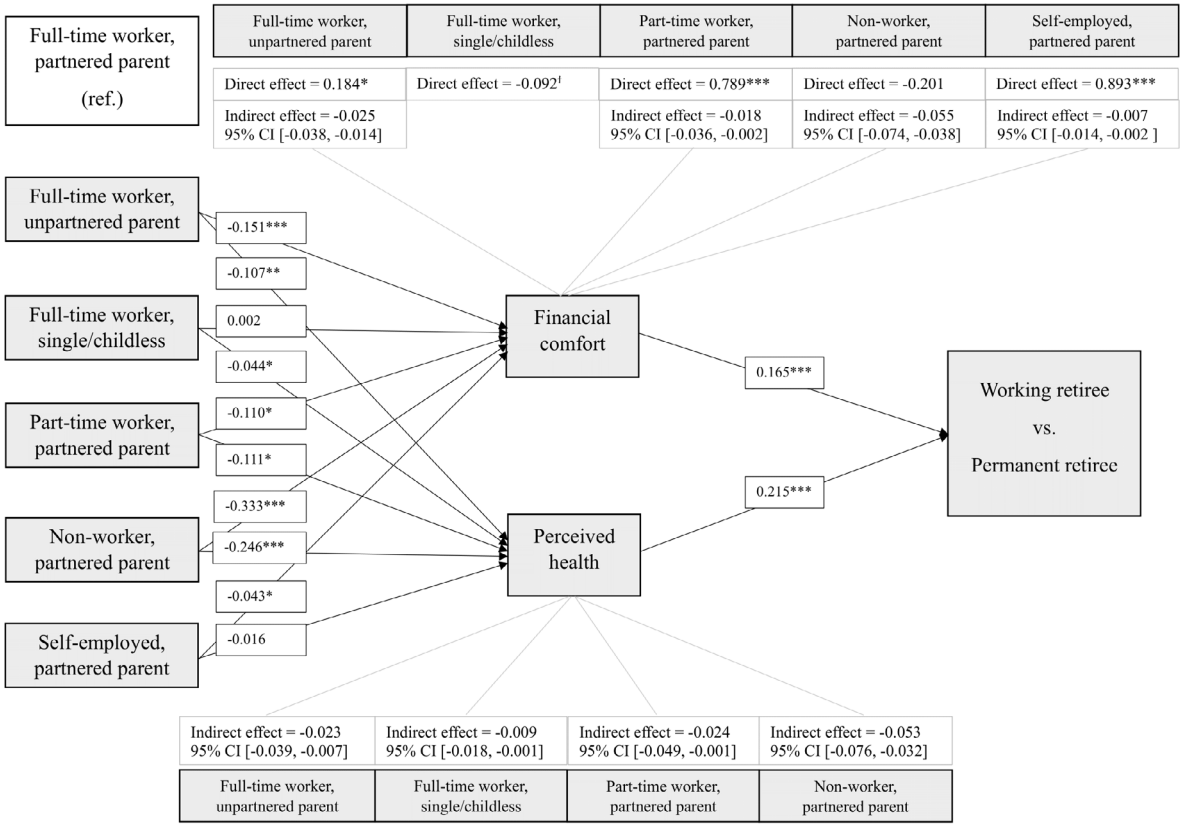
Table B5 (continued)

	Men						Women					
	Model 1		Model 1		Model 1		Model 1		Model 1		Model 1	
	B	*SE*	*B*		*SE*	*B*		*SE*	*B*		*SE*	*B*		*SE*
Full-time worker, single/ childless couple (vs. FT-PP)			.000		.000	.000		.000			.000	*	.000	.000		.000
Part-time worker, partnered parent (vs. FT-PP)			.000		.000	.000		.000			.004	*	.004	.005	*	.005
Non-worker, partnered parent (vs. FT-PP)			.000		.000	.000		.000			.013	*	.006	.016	*	.007
Self-employed, partnered parent (vs. FT-PP)			.001	*	.002	.001	*	.002			.014	*	.009	.015	*	.010

Notes: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. For variance components, * indicates that a 95% confidence interval does not include 0. FT-PP: full-time worker, partnered parent.

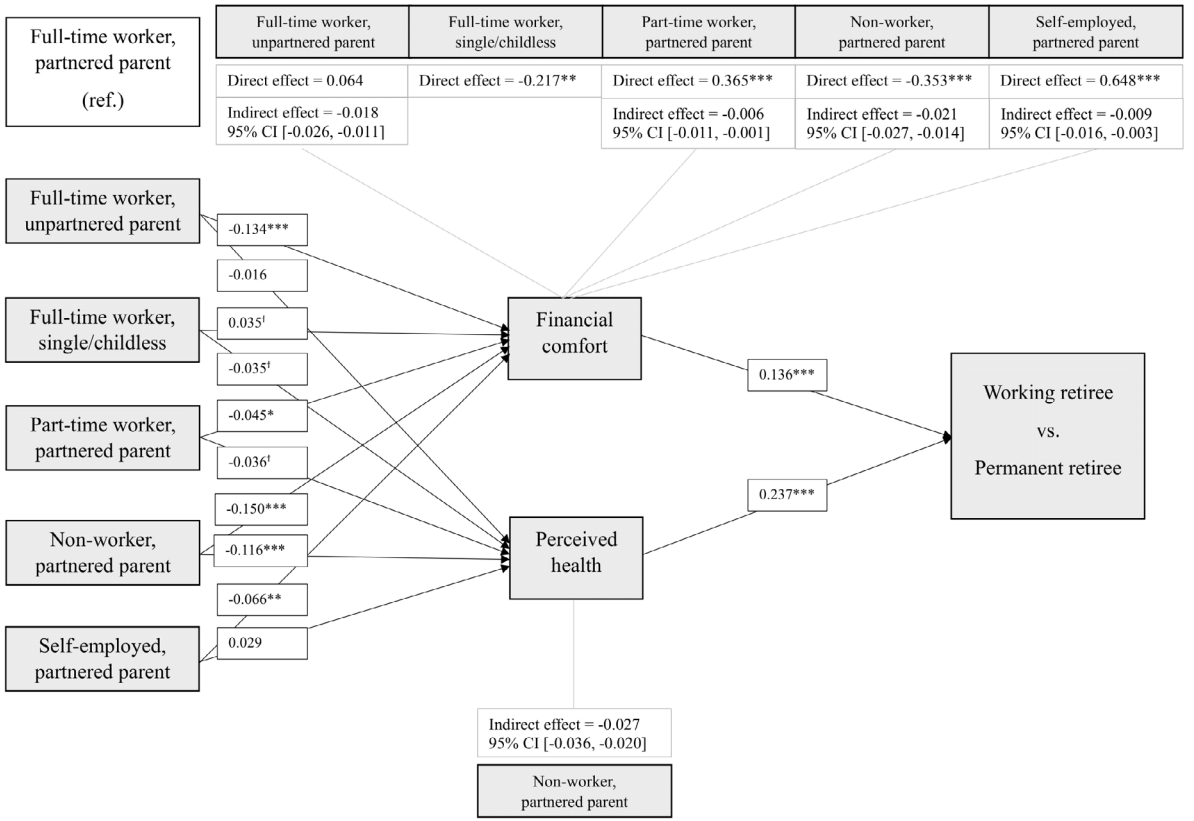
Sources: SHARE waves 1-9, OECD, and Eurostat.

Figure C1 Mediation results from the PROCESS macro in SPSS: Men



Note: $^{\dagger}p < .10$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. Direct and indirect effects are on a logo-dds metric. Controls, including country-level factors, are not shown.

Figure C2 Mediation results from the PROCESS macro in SPSS: Women



Note: †$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$. Direct and indirect effects are on a log-odds metric. Controls, including country-level factors, are not shown.

Table C1 Work-family trajectories, finances, health, bridge employment, and welfare state generosity across European countries

	Work-family trajectories							Finances		Health		Bridge employment		Welfare state			
		FT-PP	FT-UP	FT-SC	PT-PP	NW-PP	SE-PP	Financial comfort		Perceived health		Permanent retiree	Working retiree	Pension expenditure		Healthcare expenditure	
	N	%	%	%	%	%	%	*M*	*SD*	*M*	*SD*	%	%	*M*	*SD*	*M*	*SD*
Austria	2,880	47.29	6.46	11.88	7.26	16.63	10.49	3.16	0.81	3.09	1.04	78.16	21.84	5.62	0.31	3.96	0.14
Belgium	4,425	50.33	5.18	13.04	6.58	17.11	7.77	3.06	0.95	3.06	0.99	73.58	26.42	4.38	0.16	3.75	0.18
Bulgaria	703	78.09	4.98	11.24	0.57	2.99	2.13	1.91	0.77	2.63	1.13	83.21	16.79	2.60	0.14	2.33	0.05
Croatia	1,425	69.19	4.21	7.79	0.56	15.37	2.88	2.11	0.87	2.63	1.14	84.77	15.23	3.64	0.21	2.29	0.04
Cyprus	608	52.30	1.32	3.62	1.15	31.41	10.20	2.35	1.05	2.88	1.09	93.75	6.25	5.37	0.35	3.74	0.16
Czechia	4,026	79.56	8.40	6.91	2.06	1.61	1.47	2.64	0.89	2.67	0.93	67.61	32.39	3.83	0.29	3.31	0.23
Denmark	2,717	54.99	5.04	9.61	11.96	9.16	9.24	3.51	0.75	3.49	1.12	58.01	41.99	4.70	0.28	3.95	0.29
Estonia	3,827	74.34	8.49	11.05	2.46	1.75	1.91	2.58	0.90	2.19	0.81	56.96	43.04	3.22	0.33	2.53	0.17
Finland	990	66.46	6.36	10.71	2.93	5.15	8.38	3.06	0.85	2.75	0.95	72.83	27.17	4.05	0.15	2.90	0.14
France	3,387	50.43	5.88	10.51	5.55	17.92	9.71	2.90	0.90	2.88	0.99	77.27	22.73	5.22	0.26	4.10	0.22
Germany	3,484	55.31	3.67	10.02	10.53	14.58	5.88	3.16	0.88	2.74	0.96	67.65	32.35	4.12	0.48	3.61	0.17
Greece	2,373	34.72	1.85	10.45	0.80	27.31	24.86	2.04	0.91	3.03	1.00	90.98	9.02	4.80	0.55	2.94	0.38
Hungary	1,138	77.33	5.62	8.17	1.05	5.45	2.37	1.95	0.67	2.36	0.99	80.49	19.51	4.17	0.62	2.95	0.24
Ireland	336	41.37	1.79	11.61	4.46	33.04	7.74	2.83	0.92	3.16	1.19	82.44	17.56	3.60	0.04	6.04	0.00
Italy	3,638	48.24	1.62	9.62	2.69	23.78	14.05	2.32	0.92	2.76	1.03	84.03	15.97	4.85	0.14	2.69	0.07
Latvia	689	73.15	11.47	11.47	1.31	2.03	0.58	2.13	0.79	2.08	0.77	80.41	19.59	2.42	0.07	1.96	0.15
Lithuania	1,146	72.51	10.47	9.42	2.71	3.58	1.31	2.31	0.87	2.27	0.78	75.39	24.61	2.31	0.02	2.24	0.04
Luxembourg	878	48.75	4.44	12.30	6.15	21.98	6.38	3.39	0.83	2.94	1.04	72.32	27.68	4.54	0.08	2.63	0.12
Malta	573	39.79	0.00	20.59	1.75	31.41	6.46	2.64	0.90	2.79	0.95	87.09	12.91	2.58	0.11	3.29	0.18
Poland	3,298	61.98	4.58	5.15	1.58	11.13	15.59	2.23	0.88	2.29	0.94	80.87	19.13	5.64	0.97	2.91	0.27

Table C1 (continued)

	Work-family trajectories							Finances		Health		Bridge employment		Welfare state			
		FT-PP	FT-UP	FT-SC	PT-PP	NW-PP	SE-PP	Financial comfort		Perceived health		Permanent retiree	Working retiree	Pension expenditure		Healthcare expenditure	
	N	%	%	%	%	%	%	*M*	*SD*	*M*	*SD*	%	%	*M*	*SD*	*M*	*SD*
Portugal	806	62.78	1.86	10.05	1.36	15.63	8.31	2.25	0.95	2.31	0.93	84.37	15.63	4.90	0.31	3.35	0.29
Romania	1,039	67.47	4.14	6.64	1.25	19.25	1.25	2.05	0.93	2.33	1.00	93.36	6.64	3.15	0.10	2.01	0.06
Slovakia	759	77.73	3.43	11.73	0.53	4.87	1.71	2.65	0.82	3.08	1.02	88.41	11.59	3.93	0.25	3.19	0.20
Slovenia	2,837	73.88	4.12	9.41	0.28	10.22	2.08	2.46	0.97	2.72	1.01	82.13	17.87	4.46	0.38	3.26	0.11
Spain	3,463	49.32	1.33	10.28	1.96	24.03	13.08	2.55	0.92	2.63	0.96	79.18	20.82	4.21	0.39	3.40	0.24
Sweden	3,187	58.24	5.71	10.29	12.27	6.84	6.65	3.38	0.78	3.43	1.06	50.71	49.29	4.04	0.24	3.36	0.25
Switzerland	2,248	35.14	2.98	14.15	15.48	21.57	10.68	3.38	0.78	3.36	0.95	58.99	41.01	4.55	0.21	4.02	0.04
The Netherlands	1,764	36.11	2.78	11.56	14.91	27.21	7.43	3.26	0.83	3.14	1.01	71.49	28.51	5.28	0.43	4.25	0.28

Notes: FT-PP: Full-time worker, partnered parent. FT-UP: Full-time worker, unpartnered parent. FT-SC: Full-time worker, single/childless couple. PT-PP: Part-time worker, partnered parent. NW-PP: Non-worker, partnered parent. SE-PP: Self-employed, partnered parent.

Sources: SHARE waves 1-9 and Eurostat.

Table C2 Multilevel regression analysis of bridge employment versus permanent retirement among men ($N = 26{,}707$)

	Model 1			Model 2			Model 3			Model 4		
	B		*SE*	*B*		*SE*	*B*		*SE*	*B*		*SE*
Work-family trajectories												
Full-time worker, unpartnered parent (vs FT-PP)	0.029	†	0.016	0.037	*	0.016	0.039	*	0.015	0.039	*	0.015
Full-time worker, single/childless couple (vs FT-PP)	-0.020	*	0.008	-0.018	*	0.008	-0.016	*	0.008	-0.017	*	0.008
Part-time worker, partnered parent (vs FT-PP)	0.159	***	0.023	0.165	***	0.023	0.167	***	0.023	0.166	***	0.023
Non-worker, partnered parent (vs FT-PP)	-0.035	†	0.020	-0.019		0.020	-0.020		0.020	-0.020		0.020
Self-employed, partnered parent (vs FT-PP)	0.148	***	0.009	0.149	***	0.009	0.147	***	0.008	0.147	***	0.008
Finances and health												
Financial comfort				0.025	***	0.003	0.024	***	0.004	0.025	***	0.005
Perceived health				0.034	***	0.003	0.033	***	0.006	0.033	***	0.006
Educational level												
Low-educated (vs high-educated)	-0.115	***	0.007	-0.087	***	0.007	-0.087	***	0.007	-0.087	***	0.007
Moderate-educated (vs high-educated)	-0.074	***	0.007	-0.059	***	0.007	-0.057	***	0.007	-0.057	***	0.007
Birth cohort												
1940-1945 (vs pre-1940)	0.137	***	0.007	0.132	***	0.007	0.132	***	0.007	0.132	***	0.007
1946-1950 (vs pre-1940)	0.224	***	0.008	0.220	***	0.008	0.221	***	0.008	0.221	***	0.008
Post-1950 (vs pre-1940)	0.332	***	0.008	0.333	***	0.008	0.336	***	0.008	0.338	***	0.008
Living arrangement												
Partner in the household (vs. no)	-0.002		0.007	-0.006		0.007	-0.006	*	0.007	-0.006		0.007
Child(ren) in the household (vs. no)	0.025	**	0.009	0.030	**	0.009	0.031	***	0.009	0.031	***	0.009

Table C2 (continued)

	Model 1			Model 2			Model 3			Model 4	
	B		*SE*	*B*		*SE*	*B*		*SE*	*B*	*SE*
Country level											
Pension expenditure	-0.018		0.015	-0.010		0.014	0.004		0.016	-0.004	0.013
Healthcare expenditure	0.072	**	0.023	0.070	**	0.023	0.059	**	0.020	0.040	0.023
Cross-level interactions											
Financial comfort X pension expenditure							-0.004		0.004		
Perceived health X healthcare expenditure										0.011	0.006
Intercept	0.139	***	0.029	-0.039		0.030	-0.033		0.022	-0.035	0.022

Notes: $^{\dagger}p < 0.08$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. FT-PP: Full-time worker, partnered parent. Models involve variance components, which are all statistically significant.

Sources: SHARE waves 1-9 and Eurostat.

Table C3 Multilevel regression analysis of bridge employment versus permanent retirement among women ($N = 31,937$)

	Model 1			Model 2			Model 3			Model 4		
	B		*SE*	*B*		*SE*	*B*		*SE*	*B*		*SE*
Work-family trajectories												
Full-time worker, unpartnered parent (vs FT-PP)	0.021	*	0.009	0.024	*	0.009	0.025	**	0.009	0.025	**	0.009
Full-time worker, single/childless couple (vs FT-PP)	-0.028	**	0.008	-0.027	**	0.008	-0.024	**	0.008	-0.024	**	0.008
Part-time worker, partnered parent (vs FT-PP)	0.081	***	0.009	0.082	***	0.009	0.082	***	0.008	0.082	***	0.008
Non-worker, partnered parent (vs FT-PP)	-0.037	***	0.006	-0.031	***	0.006	-0.034	***	0.006	-0.034	***	0.006
Self-employed, partnered parent (vs FT-PP)	0.095	***	0.010	0.095	***	0.010	0.093	***	0.010	0.093	***	0.010
Finances and health												
Financial comfort				0.017	***	0.003	0.014	**	0.005	0.014	**	0.005
Perceived health				0.030	***	0.002	0.023	***	0.006	0.024	***	0.006
Educational level												
Low-educated (vs high-educated)	-0.117	***	0.007	-0.096	***	0.007	-0.094	***	0.007	-0.094	***	0.007
Moderate-educated (vs high-educated)	-0.080	***	0.006	-0.070	***	0.006	-0.067	***	0.006	-0.067	***	0.006
Birth cohort												
1940-1945 (vs pre-1940)	0.107	***	0.006	0.103	***	0.006	0.101	***	0.006	0.101	***	0.006
1946-1950 (vs pre-1940)	0.214	***	0.007	0.207	***	0.007	0.207	***	0.007	0.207	***	0.007
Post-1950 (vs pre-1940)	0.348	***	0.007	0.345	***	0.007	0.351	***	0.007	0.352	***	0.007
Living arrangement												
Partner in the household (vs. no)	-0.067	***	0.005	-0.073	***	0.005	-0.071	***	0.005	-0.071	***	0.005
Child(ren) in the household (vs. no)	0.001		0.007	0.004		0.007	0.005		0.007	0.005		0.007

Table C3 (continued)

	Model 1			Model 1			Model 1			Model 1		
	B		*SE*	*B*		*SE*	*B*		*SE*	*B*		*SE*
Country level												
Pension expenditure	0.002		0.014	0.007		0.013	0.020		0.014	0.019		0.011
Healthcare expenditure	0.033		0.021	0.030		0.021	0.019		0.017	0.008		0.019
Cross-level interactions												
Financial comfort X pension expenditure							0.000		0.004			
Perceived health X healthcare expenditure										0.009		0.006
Intercept	0.156	***	0.025	0.020		0.026	0.044	*	0.017	0.043	*	0.017

Notes: $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. FT-PP: Full-time worker, partnered parent. Models involve variance components, which are all statistically significant.

Sources: SHARE waves 1-9 and Eurostat.

Table D1 Regression coefficients of retirement adjustment variables with control variables

	Money/income			Social contacts			Societal prestige			Societal role fulfillment		
Men (n = 2,321; ref. = Traditional male life course)	*B*		*SE*	*B*		*SE*	*B*		*SE*	*B*		*SE*
Late-career mobile worker	0.017		0.063	-0.013		0.069	-0.018		0.054	0.032		0.056
Lifelong volunteer	-0.151	**	0.048	0.062		0.051	-0.060		0.047	-0.091	*	0.046
Career maker	0.098		0.072	-0.014		0.073	-0.113	*	0.057	-0.035		0.061
Occupational class	-0.045	***	0.011	0.006		0.011	-0.022	*	0.010	-0.016		0.010
Individual net monthly income	-0.054	**	0.017	0.002		0.017	-0.015		0.016	-0.014		0.016
Number of chronic diseases	0.124	***	0.015	0.057	***	0.015	0.041	**	0.014	0.046	***	0.013
Partner status (vs. no partner)	0.145	*	0.063	-0.056		0.068	0.002		0.054	-0.020		0.057
Time since retirement	-0.057	***	0.012	-0.014		0.014	-0.019		0.012	-0.011		0.012
Intercept	2.462	***	0.094	2.428	***	0.101	1.957	***	0.091	2.212	***	0.088
Women (n = 1,946; ref. = Traditional female life course)												
Re-entering mother	0.258	***	0.072	0.042		0.095	-0.057		0.078	-0.051		0.084
Lifelong giver	-0.078		0.056	0.005		0.063	-0.206	***	0.048	-0.176	**	0.059
Work-oriented caregiver	-0.014		0.060	-0.117		0.064	-0.097		0.057	-0.098		0.063
Occupational class	-0.056	***	0.012	0.011		0.013	-0.007		0.011	0.000		0.012
Individual net monthly income	-0.003		0.017	-0.045	*	0.019	-0.002		0.017	-0.026		0.018
Number of chronic diseases	0.090	***	0.015	0.063	***	0.016	0.031	*	0.014	0.051	**	0.016
Partner status (vs. no partner)	0.072		0.047	0.061		0.059	0.101	*	0.042	0.067		0.049
Time since retirement	-0.056	***	0.016	-0.034		0.017	-0.011		0.014	-0.013		0.016
Intercept	2.341	***	0.105	2.624	***	0.108	1.827	***	0.092	2.245	***	0.098

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. Standard errors are robust standard errors clustered by the organization where respondents worked at the baseline.

Control variables are measured at the baseline, except for time since retirement, which is computed based on the follow-up observation.

Missing values on control variables are imputed using chained equations, and models are estimated with multiple imputations (n = 5).

Table D2 Regression coefficients of retirement adjustment variables with all classes compared to each other

	Money/income			Social contacts		Societal prestige		Societal role fulfillment		
Men (n = 2,321)	*B*		*SE*	*B*	*SE*	*B*	*SE*	*B*		*SE*
Lifelong volunteer vs. Career maker	-0.262	**	0.076	0.066	0.075	0.049	0.060	-0.061		0.067
Lifelong volunteer vs. Late-career mobile worker	-0.234	**	0.068	0.070	0.070	-0.071	0.062	-0.149	*	0.064
Career maker vs. Late-career mobile worker	0.029		0.090	0.004	0.087	-0.120	0.068	-0.088		0.073
Women (n = 1,946)										
Lifelong giver vs. Work-oriented caregiver	-0.093		0.072	0.133	0.075	-0.099	0.058	-0.070		0.066
Lifelong giver vs. Re-entering mother	-0.405	***	0.087	-0.052	0.103	-0.151	0.078	-0.137		0.086
Work-oriented caregiver vs. Re-entering mother	-0.311	***	0.088	-0.184	0.101	-0.052	0.087	-0.066		0.094

*p < 0.05, **p < 0.01, ***p < 0.001. Standard errors are robust standard errors clustered by the organization where respondents worked at the baseline.

Declaration Data Management PhD Thesis

Radboud Social Cultural Research, Radboud University

Section A. Primary data/information

For my thesis I have collected **primary** data/information.

Yes ☐ → Complete section A.
No ☑ → Go to section B.

I declare that

A1.	The data for my thesis are obtained with the consent of informants/ respondents.	N/A
A2.	Privacy sensitive data/information is encrypted and is stored on a protected computer or server environment.	N/A
A3.	The data/information is securely stored for reasons of scientific integrity at least for 10 years after finishing PhD research.	N/A
A4.	Anonymized data/information is registered in a well-known data repository system (Research Data Repository, DANS-KNAW).	N/A
A5.	Access to anonymized data/information is arranged referring to the FAIR principles of data management.	N/A

Section B. Secondary data/information

For my thesis I have used data/information **collected by other researchers**.

Yes ☑ → Complete section B.
No ☐ → Go to section C.

I declare that

B1.	The data/information is obtained legitimately.	Yes
B2.	Non-public or secured data/information is stored on a protected computer or server during research.	Yes
B3.	The data/information is not shared with third parties, and has been treated in accordance with the agreements made with the information provider.	Yes

Section C. General

I declare that

C1.	A short methodological justification, and/or the syntax and method of data/ information processing is deposited in a so-called "publication package."	Yes
C2.	It is not possible to link data/information in publications to individuals (except with explicit consent).	Yes
C3.	The data/information is analyzed in a trustworthy manner and is not been deliberately manipulated toward certain outcomes.	Yes

If one or more statements cannot be confirmed, the PhD should explain in an Annex why certain conditions are not met following the "comply or explain" principle.

Nederlandse Samenvatting (Dutch Summary)

Terwijl de vergrijzing in Europa en Nederland leidt tot hervormingen van pensioensystemen, blijkt dat deze hervormingen niet voor iedereen dezelfde gevolgen hebben. Niet iedereen is namelijk in staat om langer door te werken. Fysiek belastend werk, onderbroken loopbanen en zorgtaken zorgen ervoor dat bepaalde groepen – vaak vrouwen en lager opgeleiden – eerder en vaker met financiële en gezondheidsproblemen te maken krijgen bij het bereiken van de pensioenleeftijd. Hierdoor komt sociale ongelijkheid in pensionering niet uit de lucht vallen, maar bouwt die zich op over de levensloop.

Dit proefschrift onderzoekt hoe levenslopen in werk, gezin, gezondheid, zorg en vrijwilligerswerk vóór pensionering samenhangen met drie uitkomsten in pensionering: (1) de vrijwilligheid van pensionering, (2) doorwerken na pensioen, en (3) aanpassing aan het leven na pensionering. Daarbij wordt ook bekeken hoe de nationale beleidscontext, met name de generositeit van de verzorgingsstaat, deze verbanden versterken of afzwakken, en of dit verschilt tussen mannen en vrouwen. De analyses zijn gebaseerd op Europese SHARE-data en Nederlandse NPPS-data, die zowel retrospectieve als prospectieve levensloopenquêtegegevens combineren met tijdreeksen van sociaal overheidsbeleid.

Dit proefschrift bestaat uit vier empirische hoofdstukken. In hoofdstuk 2 worden zes typische werk-gezinslevenslopen van 15 tot 49 jaar in 28 Europese landen geïdentificeerd. Het meest voorkomende levensloop is voltijdswerk in loondienst met een langdurige partnerrelatie en kinderen. Andere levenslopen wijken hiervan af door parttimewerk, niet-werkend, zelfstandigheid, alleenstaand ouderschap en kinderloosheid. Vrouwen hebben vaker onderbroken of parttime loopbanen, zeker in conservatieve verzorgingsstaten. Hoogopgeleide mannen hebben vaker een levensloop dat gekenmerkt wordt door stabiel fulltime werk, huwelijk en ouderschap, terwijl lager opgeleide vrouwen vaker een levensloop van niet-werkende moeders hebben. Dit hoofdstuk toont aan dat werk en gezin sterk verweven zijn over de levensloop en sterk gestructureerd worden door gender, opleidingsniveau, cohort en de verzorgingsstaat.

In hoofdstuk 3 wordt onderzocht in hoeverre werk-gezinslevenslopen samenhangen met de vrijwilligheid van pensionering. Mensen met voltijdswerk en een traditioneel gezin stoppen vaker vrijwillig, terwijl mensen met andere levenslopen (bijvoorbeeld alleenstaande ouders, parttimers of mensen met werkonderbrekingen) vaker gedwongen stoppen of moeten wachten tot ze voldoende pensioenrechten hebben opbouwd. In landen met een genereuze verzorgingsstaat (gemeten via sociale uitgaven) blijken met name vrouwen met parttime banen vaker vrijwillig te kunnen stoppen, terwijl langdurig niet-werkenden (vaak vrouwen met zorgtaken) juist minder vaak vrijwillig met pensioen kunnen. Dit duidt op een selectieve werking van sociale bescherming: sommige groepen worden geholpen, andere blijven achter.

Hoofdstuk 4 zoomt in op het doorwerken na pensioen. Mensen die gescheiden zijn, parttimers en zelfstandigen werken vaker door, vaak ook uit financiële noodzaak. Ook gezondheid speelt een rol: slechte gezondheid beperkt met name het doorwerken van mensen die vóór pensionering langdurig niet werkten. In landen met hogere pensioenuitgaven is het verband tussen financiële nood en doorwerken na pensioen zwakker, wat duidt op een compenserende rol van genereuze pensioensystemen, maar alleen voor mensen boven de 65. Gezondere gepensioneerden nemen vaker een baan na pension aan in landen met hogere zorguitgaven, wat duidt op het belang van de bredere maatschappelijk context én de individuele hulpbronnen.

In hoofdstuk 5 wordt binnen Nederland gekeken naar de samenhang tussen levenslooppatronen en pensioenaanpassing voor mannen en vrouwen. Bij mannen blijken degenen met stabiele loopbanen en vrijwilligerswerk zich beter aan te passen op financieel, sociaal en psychologisch vlak. Bij vrouwen geldt dit voor degenen die werk, zorg en vrijwilligerswerk combineerden. Vrouwen die na kinderzorg

terugkeerden op de arbeidsmarkt rapporteren vooral financiële aanpassingsproblemen. Opvallend is dat het gemis van sociale contacten op het werk het meest algemeen gemiste aspect is bij pensionering, onafhankelijk van de levensloop.

Uit deze empirische hoofdstukken komen drie overkoepelende conclusies naar voren. Ten eerste blijkt dat levenslopen – en niet enkel sociaaldemografische kenmerken als geslacht of opleiding – sterk bepalend zijn voor ongelijkheid in pensionering. Stabiele loopbanen en sociale inbedding leveren meer agency, hulpbronnen en comfort op bij pensionering. Onstabiele of onderbroken levenslopen leiden tot hogere risico's op onvrijwillige pensionering, noodzaak tot het doorwerken na pensioen, en meer moeilijkheden in aanpassing.

Ten tweede blijkt dat de verzorgingsstaat ongelijkheid kan verkleinen, maar ook versterken. Generositeit in sociale bescherming vergroot vrijwillige pensionering voor parttimers, maar sluit langdurig niet-werkenden uit (vaak moeders en onbetaalde mantelzorgers). Generieke beleidsmaatregelen werken dus selectief en zijn afhankelijk van hoe pensioen- en verzekeringssystemen zijn opgebouwd, wie toegang krijgt tot rechten, en of levensloopdiversiteit wordt herkenden.

Ten derde is gender een organiserend principe in de vorming van levenslopen én hun gevolgen. Vrouwen volgen vaker non-standaard levenslopen en ervaren vaker financiële onzekerheid en aanpassingsproblemen. Tegelijk bestaan er grote verschillen tussen mannen en vrouwen, afhankelijk van bijvoorbeeld opleidingsniveau, gezinssituatie en carrièrepatronen. Dit pleit voor een gendersensitieve benadering die ook binnen-gendervariatie erkent.

Concluderend is sociale ongelijkheid in de pensionering geen toevallig of individueel probleem, maar de uitkomst van levenslange processen, die beïnvloed worden door geslacht, sociale structuur en beleid. Door een longitudinale en multidimensionale aanpak draagt dit proefschrift bij aan theorie- en beleidsontwikkeling rondom ouder worden. Een rechtvaardige pensioenvoorziening vraagt om erkenning van ongelijkheden in levenslopen en om beleid dat deze ongelijkheden tijdig en structureel aanpakt.

Dankwoord (Acknowledgements, Teşekkürler)

Groningen, July, 2025

It feels like a surreal dream to be at this point in my life: obtaining a PhD in the Netherlands, which has provided me with some things to leave behind, acknowledge, and look forward.

Leave Behind

Nobody could imagine that a little boy born in some kind of slum area in an underdeveloped, poor, and disadvantaged region of Turkey would come this far in his education and training. Especially because his father went to school only for 3 years (as he had to work as a child to support his family), and his mother never went to school and never even learned how to speak Turkish properly. That boy somehow learned Turkish, and thanks to the assimilationist Turkish educational system, even almost forgot how to speak his beautiful mother tongue of Kurdish, and succeeded at school. He was so successful that he did not become the only member of his family completing secondary education; he also took the 21st place among thousands of students in the highly competitive Turkish university entrance exam. He was so naïve when he arrived at Bogazici University, which was (at least back then) the best, the most prestigious, and supposedly the most democratic, liberal, and free university in Turkey. He was naïve because he didn't know that he had to prove that he was not a "terrorist" simply because of being a Kurd. He didn't know that he would get attacked multiple times, both verbally and physically, simply because of speaking Kurdish on the phone with his mother. That boy understood that if he wanted a decent life, he had to leave Turkey behind.

I first went to Canada for a PhD in psychology. In retrospect, it was not a coincidence that I first went to Canada. The first and only person who supported me when all the others attacked me because of being Kurdish was a Canadian. I thought Canadians would be so nice as to accept me. And they did. For the first time in my life, I felt proud of being different from the majority. My difference was now something cherished and celebrated. This helped me to be at peace with my marginalized Kurdish identity. However, although I was welcomed by Canadians, had peace between my social identities, and enjoyed the freezing weather of Edmonton, I had to leave Canada behind. This was thanks to the COVID-19 pandemic. It made me feel so lonely and depressed, as there was a huge ocean and a 9-hour time difference between me and my loved ones. The fact that I couldn't travel and reach out to my family when I wanted made me realize what I want in life: I want to be closer to my loved ones, but I don't want to go back to Turkey again. This is why I came to the Netherlands.

Coming to the Netherlands was a big but an easy decision because the love of my life was there. My application for a residence permit as a partner was quickly approved. I was amazed at how inclusive the Dutch immigration system was. We were not married or registered as partners, but the Dutch government recognized us as family and gave me a residence permit. It was one of the happiest and most relieving moments of my life when I was able to come to the Netherlands. This was the official start of my honeymoon period of migration. Everything was so good. I fell in love with the flat, green, and watery landscape of the country. I liked the directness, joyfulness, and knowledge and awareness of the Dutch people. And I did my best to integrate and to be one of them, adopting the social etiquette, learning the language, and adjusting my mindset to better understand their perspectives and values. However, it shortly became clear that whatever I do, I cannot be one of them. Even if you are more Dutch in every respect than a typical Dutch person, the fact that you don't look like a Dutch person is enough to remind others, but more sadly to yourself, that you are still an outsider.

It was disappointing to feel excluded. Especially because the Netherlands is often promoted as a progressive country when it comes to the social domain. And also because the way you are excluded is so implicit, hidden, and at an advanced level that you cannot simply describe or show it. You just feel it. In Turkey, for example, they just tell you or they just hit you. They make it very clear that they don't like you and they don't want you. But here, nobody tells you or nobody hits you. They just hit your feelings. And a punch to your feelings hurts more than a punch to your body.

I felt trapped. I couldn't go to Turkey because there I was treated like shit because of being Kurdish. I had to stay in the Netherlands but here I felt like shit because of being from Turkey. Only then did I realize that the only way out was to go to myself. I started my inner journey through therapy, which helped me retain my motivation to integrate in the Netherlands while also helping me be at peace with my Turkish identity. I always thought that I would give up on my Turkish citizenship when I obtained my Dutch citizenship. However, thanks to my experiences in the Netherlands, I came to understand the value of holding on to all parts of my identity, even those I once thought I could leave behind.

Acknowledge

Coming to the Netherlands and doing this PhD is the best decision of my life (at least so far) because it changed my personal and professional life in significant ways. I would like to acknowledge the contributions of people who had an impact on my journey and growth, those who supported me, taught me, and walked alongside me during this transformative chapter of my life.

First of all, I am grateful to my supervisors.

Mark, when you called me to offer this PhD position, I became really happy. During the phone call, I was walking on the clouds, and I told you, "I promise, I will be a very good student." Whether or not I kept my promise is up to you, but what I can say for sure is that you have been a very good supervisor. Your door was always open to me. Whenever I had a question, you were there to help. It felt as if you had no other job. Your only job was me. I was your first and only priority. Of course, the reality was different. You had so many other things to do, both at work and at home. Yet, somehow, you made me feel like I am your sole responsibility. And thanks to your generous availability, I learned a lot from you. I learned things that I couldn't learn any better if I followed formal courses or workshops. For example, it is you who taught me how to theorize and hypothesize, how to be rigorous and robust in handling data, how to run sequence and multilevel analyses, how to interpret cross-level interactions, and many others. On top of that, whenever we were in a group setting, be it a departmental event, an ICS forum day, a Netspar conference, or a Day of Sociology, you never left me alone. You always approached me to make sure I felt at home, which is also what you did whenever I was at the office in Nijmegen. It was usually you who knocked on my door to check in. I will always appreciate all you did for me, and I will always remember your contributions to my professional development.

Gerbert, I don't know if you have noticed, but I have never called you by your name. When writing an email or when talking to other people about you, I say your name, for sure. But face to face, I have never called you. This is not because I have seen you higher in the social hierarchy or because I am intimidated by you. You are not that type of supervisor. You are just the opposite. Humble and friendly. The reason why I don't call you by your name is that I have seen you as family. It is really difficult for me to call, for example, my brothers, sisters, or sisters in law by their names. I just cannot. I don't know why. And somehow I did the same to you. I felt like you were family. It is probably because you always cared about my development and growth. Just like a parent who encourages and supports their toddler to walk (or bike if it is a Dutch parent), you always pushed me (in a positive way) to realize my potential. When discussing papers, you always asked what I wanted and what I thought. You prioritized my needs and wishes, oftentimes before I even realized that I had those needs and wishes.

You gave me the liberty to do the things I want to do. You opened new doors for me. For instance, you gave me the liberty to work on whatever I wanted when I went to the WZB for my internship. When I told you I wanted to stay in the Netherlands, you said that it would be good if I had a paper about the Netherlands, and sent me to the way of Kène at the NIDI. You did not become part of that paper, because you said it is better to have papers with people other than your supervisors. That is to say, you always cared about me and my development, which is why you felt like family to me, and I never called you Gerbert. But you are a person whose name will always ring in my ears.

Next to my supervisors, I would like to thank the members of my manuscript committee, Prof. Dr. Beatrice van der Heijden, Prof. Dr. Matthijs Kalmijn, and Prof. Dr. Ute Bültmann, for reading and assessing my PhD dissertation. I appreciate your time and effort and your interest in my work.

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Maikel, I will never forget the moment when you asked me about my family after the earthquake hit the region where they live. It was not the most appropriate place for talking about such a sensitive topic. It was a toilet. But for me, it was the best place to have this conversation. Although so many people ignored me, avoided having contact with me, or refrained from having eye contact with me during this period, you were brave and caring enough to ask me about it at the first moment you saw me. It meant the world to me. It made me feel valued and seen. I always had a positive impression of you because of your kindness, humble attitude, and empathy, but after this toilet moment, I felt like I could share anything with you. This is why you have always been the first person to hear about some developments in my private life and the first person I go to whenever I have a question about some rules, regulations, or tips and tricks about the life in the Netherlands. I know that you will always do your best to help me. It is a privilege to have you by my side. Thank you.

Lennard, you are my first local buddy. You walked me around Nijmegen, told me about all the stories and history of buildings in the city and ships in de Waal, and hosted me at your home. I didn't have much contact with you afterwards. But you never forgot me. When you heard about the earthquake in the city where my family lives, you immediately messaged me. I was very happy to receive this message, but I was also quite surprised. I don't even remember whether I told you from which city I am coming. But you remembered it very well. You cared about me. That was the moment I thought I should stay connected with you because there are not a lot of people like you. I have always appreciated your sense of humor, your joy, your intellectual engagement, and your self-critical, inclusive, and welcoming view on cultural diversity. I feel lucky to know you, and your mere existence somewhere in the world gives me a sense of confidence and comfort. Thank you.

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Bilge, bu PhD'yi yapmamın sebebi sensin. Sen olmasan bu kitap asla yazılmayacaktı ve benim hayatımın bambaşka bir hikayesi olacaktı. İstanbul'da, Boğaziçi'nde (ilginç bir şekilde sosyoloji bölümünün seminer odasında) Bilge Hoca'nın sosyal psikoloji dersi için ilk defa bir araya geldiğimizde galiba yüzüne bile bakmamıştım. Çünkü utangaç ve çekingendim. Şimdi her gün o güzel yüzüne bakabildiğim için çok şanslıyım. Nijmegen'e her gidişimde bir an önce eve dönmek isterdim. Yolun yorgunluğu ve günün yoğunluğu beni tüketmişken senin evde olman ve sana kavuşacak olmam fikri hep beni rahatlatırdı. Sana geliyor olduğumu fark ettiğim an yüzüme hemen bir gülümseme, kalbime ferahlık gelirdi. Dile kolay, bu an gerçek olsun diye tam 2 yıl uğraşmıştık. Hollanda'da PhD pozisyonu bulmakta çok zorlandım, zaman zaman vazgeçme aşamasına geldim. Ama sen hep inandın, hep bana destek oldun, motive ettin. Bu PhD pozisyonu için mülakata girdikten hemen sonra sana demiştim

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Ben PhD yapmayı senden öğrendim. Bana hep bir rol model oldun. Bir makale nasıl okunur, dosyalar ve dokümanlar nasıl sınıflandırılır ve kaydedilir, bir toplantıya nasıl hazırlanılır ve sonrasında neler yapılır, sunum nasıl hazırlanır, makale nasıl yazılır ve diğer irili ufaklı her şeyi senden gördüm. Sadece iş hayatında değil, kişisel hayatta da bana yol gösterdin. Kendine saygı duymak nedir, onu öğrettin. Sağlıklı yaşamak nedir, onu gösterdin. Gülebilmek, ağlayabilmek nedir, neden önemlidir, onu öğrettin. Kadına, çocuğa, insana nasıl yaklaşılır, onu gösterdin. Kısacası, insan olmayı, birey olmayı ve yaşamayı öğrettin. Bana bambaşka, asla hayal edemeyeceğim, hayallerimin ötesinde bir yaşamın kapılarını açtın. Benliğimin hikayesini yazıp hayatımın rotasını çizdin. Senin kaptanlığını yaptığın bu gemide, kendime giden yolu gösteren atlasıma bakıp bu deryada yol almak başıma gelen en güzel şey. İyi ki varsın, iyi ki hayatıma geldin, iyi ki bana beni buldurdun. Seni seviyorum.

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Look Forward

With all the personal and professional strengths it has provided me with, this PhD enabled me to look at the future with confidence. The challenges I faced and overcame during this process have taught me resilience, adaptability, and the value of critical thinking. As I move forward, I carry not only the knowledge I have gained but also a deeper understanding of who I am and the kind of impact I hope to make. With this mindset, I look forward to touching upon the lives of those who look like me.

About the Author

Mustafa Fırat was born on January 28, 1991, in Şanlıurfa, Turkey. He obtained a bachelor's degree (BA) in Translation and Interpreting Studies in 2015 and a master's degree (MA) in Psychology in 2019 from Bogazici University, Istanbul, Turkey. He received a second master's degree (MSc) in Psychology in 2021 from the University of Alberta, Edmonton, Canada. In 2021, he started his PhD in Sociology at Radboud University, Nijmegen, the Netherlands, where he wrote the present dissertation under the supervision of Gerbert Kraaykamp and Mark Visser. From 2021 to 2024, he taught the qualitative interviewing part of the course Life Course Transitions: Education, Work, and Family in the bachelor's program of the Department of Sociology. He completed his PhD in 2025 and defended in 2026, which was part of the Interuniversity Centre for Social Science Theory and Methodology (ICS), and the research he conducted was part of a project funded by Instituut Gak, entitled "Understanding old-age inequality: The impact of work, family and health trajectories on post-retirement economic, social, and psychological well-being across Europe" to Mark Visser as the principal investigator. During his PhD, Mustafa worked with Jan Paul Heisig at the WZB Berlin Social Science Center (from April to July 2024) as a visiting scholar and with Kène Henkens at the Netherlands Interdisciplinary Demographic Institute (NIDI) as a guest researcher (from September 2024 to April 2025).

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1. Kees van Liere (1990), *"Lastige leerlingen: Een empirisch onderzoek naar sociale oorzaken van probleemgedrag op basisscholen."* Amsterdam: Thesis Publishers
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As populations age and pension systems come under increasing financial pressure, understanding how individuals transition into and experience life in retirement has become both a scholarly and societal priority. This dissertation advances our understanding of retirement as a process shaped by the interplay between individual life courses and institutional contexts. It shows that inequalities in retirement are neither sudden nor isolated; they are the cumulative result of lived biographies structured by gender, educational level, historical time, and social policy. By integrating a longitudinal, multidimensional, and cross-national lens, the dissertation contributes to both theory and policy debates on aging and retirement. As societies continue to age and life courses grow increasingly diverse, developing equitable retirement systems requires recognizing and addressing the long arm of earlier life (dis)advantages, so that later life can be a stage of dignity, security, and choice for all.

Mustafa Fırat (1991) obtained a BA in Translation Studies and an MA in Psychology from Bogazici University and an MSc in Psychology from the University of Alberta. He completed his PhD in Sociology at Radboud University, as part of the Interuniversity Centre for Social Science Theory and Methodology (ICS).