Does Retirement Make People Happy? The Impact of Retirement on Couples' Life Satisfaction in Germany

William Fernandez[1]

Hertie School / Humboldt Universität zu Berlin

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Abstract

In the developed world, efforts are underway to extend working lives. However, discussions often overlook the potential implications of retirement for individual well-being. While the relationship between retirement and life satisfaction has been extensively studied, the effects of spousal retirement remain underexplored, particularly from a gender and timing perspective. This paper examines the impact of retirement on self-reported life satisfaction among couples in Germany. Using data from the German Socio-Economic Panel (SOEP), I employ standard fixed-effects (FE) models and fixed-effects individual slopes (FEIS) to estimate the causal effects of personal and partner retirement on life satisfaction. The findings show that retirement substantially increases life satisfaction, a result that remains robust across methodologies and specifications. For partner retirement, accounting for heterogeneous trends by health status reveals an overall positive effect, driven by men. Moreover, women appear to be worse off when their husbands retire while they remain in the workforce, whereas the opposite holds for men. To my knowledge, this is the first study to examine the impact of both personal and spousal retirement on life satisfaction using the SOEP. The results provide robust evidence that partner retirement affects life satisfaction, highlighting the importance of understanding retirement as a life course event with intra-household spillover effects that extend beyond the retiring individual.

Key words: retirement, individual well-being, partner retirement, fixed-effects.

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1. Introduction

Extending working lives has become a central recommendation by policymakers and scholars in order to address the challenges posed by aging populations in developed nations (Dubois et al., 2016). In the case of Germany, the government has decided to gradually increase its retirement age, reaching 67 years old by 2031. Despite the significance of this policy reform, discussions often omit its potential implications for individual well-being. While the effect of retirement on well-being has been widely studied, the findings have been rather inconclusive, with some studies showing a positive relationship (Ekerdt et al., 1985; Gall et al., 1997; Reitzes and Mutran, 2004), while others indicate a negative one (Richardson and Kilty, 1991), and some demonstrate no relationship at all (Beck, 1982; Bonsang and Klein, 2012; Halleröd et al., 2013; Hyde et al., 2004; Luhmann et al., 2012).

Moreover, most empirical research has focused on the life satisfaction implications of one's own retirement. However, retirement can also influence the well-being of other family members, such as spouses, through externalities associated with cohabitation, shared income, and exposure to similar stressors. Some studies have provided evidence of within-family spillover effects, but most focus on self-assesed or mental health outcomes rather than life satisfaction (Bertoni and Brunello, 2017; Messe and Wolff, 2019; Müller and Shaikh, 2018; Picchio and Ours, 2020). A few studies focus on subjective well-being measures, but the findings are inconclusive (Atalay and Barrett, 2022; Austen et al., 2022; Kettlewell and Lam, 2022). Overall, most evidence points to a negative effect of the husband's retirement on the wife's subjective well-being, though there is also evidence of a positive effect (Picchio and Ours, 2020), no effect at all (Messe and Wolff, 2019), or effects conditional on mechanisms such as prior social support levels (Kettlewell and Lam, 2022). Furthermore, long-standing research shows that couples tend to prefer joint retirement, since this type of transition simultaneously shifts the roles and resources of both spouses, thereby preventing negative effects on well-being (Blau, 1998; Gustman and Steinmeier, 1994; Hurd, 1990). However, the timing aspect has been largely overlooked in prior investigations. In the German context, where two-thirds of couples retire at different times and no study has analyzed spillover effects of retirement by gender and timing of the event, investigating the effects of spousal retirement is essential.

Despite several studies exploring the effects of retirement on self-reported life satisfaction, most of them are merely descriptive or correlational, making it difficult to isolate the causal relationship between retirement and life satisfaction (Fouquereau et al., 2001;

Gorry et al., 2018; Pinquart and Schindler, 2007; e.g. Wetzel et al., 2016). For this particular life course event, overcoming the issue of selection bias is particularly challenging, since individuals can plan and choose when to retire once they reach the early or statutory retirement age, or may abruptly exit the labor force due to personal circumstances. Some investigations have attempted to address this bias using standard fixed-effects estimators (Atalay and Barrett, 2022; Austen et al., 2022; Bonsang and Klein, 2012; Gorry et al., 2018; Kettlewell and Lam, 2022; Merz, 2018). Nevertheless, fixed effects models may fail to estimate causal effects if the parallel trends assumption is violated. This assumption is untestable and a common concern in life course research, given the high degree of heterogeneity in life course trajectories.

In this paper, I study the impact of retirement and partner retirement on life satisfaction, focusing specifically on older adults in Germany. To this end, I employ data from the German Socioeconomic Panel (SOEP). To estimate these effects and overcome the issue of selection into retirement or partner retirement, I utilize two methodological approaches: standard fixed-effects (FE) estimation and fixed-effects individual slopes (FEIS) models. As proposed by Rüttenauer and Ludwig (2023), FEIS allows the estimation of a causal effect by accounting for heterogeneous life course trajectories. Given that much of the existing research on this relationship emphasizes the importance of considering heterogeneous effects determined by economic, health, and sociodemographic characteristics, FEIS provides a more suitable analytical strategy for capturing these differences. By studying both individual and partner retirement, I provide a complete assessment of the overall impact of retirement, a major life course transition, on individual level well-being in Germany.

2. Theory and Prior Research

2.1. Partner retirement and the life course perspective

The sociological concept of the life course refers to the sequence of age-linked transitions that are embedded within social institutions and history (Bengston et al., 2005). As a theoretical orientation, the life course perspective posits that life transitions are shaped by the particular sociodemographic and institutional contexts in which they occur. In the case of retirement, this suggests that adjustment experiences are contingent on the circumstances surrounding the transition. Furthermore, a central proposition of the life course perspective is the principle of linked lives, which highlights the interconnectedness

of individuals' lives, particularly within close relationships (Elder et al., 2003). It emphasizes how partners' lives are interconnected over time in relation to changing times, places, and social institutions.

In this paper, I adopt a life course approach to study how the retirement transition affects life satisfaction. Drawing on the linked lives principle, I assume that life satisfaction is not only influenced by one's own retirement but also by partner retirement. According to this theoretical framework, an individual's retirement may influence their partner through reduced financial stability, changes in time spent together or in caregiving responsibilities, or shifts in the balance of power within the marital relationship (Bengston et al., 2005; Luhmann et al., 2014).

Several prior studies show that the retirement transition is strongly moderated by gender. In the case of spousal retirement, it is particularly important to adopt a gender perspective because the distribution of care work, household chores, and resources is generally unequal within households. According to Szinovacz and Davey (2005), exchange and resource theories suggest that power within relationships depends on spouses' relative resources and authority, both of which are influenced by employment status. Within this framework, employment serves as a power base shaped by the couple's social structure and gender ideology (Sabatelli and Shehan, 1993; Szinovacz, 1987; Szinovacz and Harpster, 1993). Consequently, retirement may alter spouses' relative power by shifting their resources and levels of dependence on one another. Such changes are more likely when one partner remains employed, often the wife, making it essential to take the timing of the event into account.[2]

When wives continue working after their husbands retire, men's life satisfaction may decline. This situation not only challenges the traditional husband–main provider ideology, but also entails a shift in resources toward the wife (Szinovacz, 1996). Moreover, because men often place greater importance on their role as workers, retiring before their wives may further weaken their claim to authority (Elwell and Maltbie-Crannell, 1981). Consistent with this perspective, Szinovacz and Davey (2005) found that retired husbands report lower life satisfaction when their wives remain employed.

Nevertheless, most evidence suggests that women fare worse following their husbands' retirement, particularly if they remain in the workforce. Possible explanations include

[2]Typically, the retirement pattern most likely to increase satisfaction is joint retirement, since it leads to parallel resource losses, promotes continuity in marital power dynamics, and preserves the husbands' authority.

retired husbands becoming more dependent on their wives' expressive resources and attention (Kulik, 1999), increased financial hardship, or the need for special care due to age-related health deterioration, since husbands are often older than their wives.

Consistent with exchange and resource theories, Moen et al. (2001) concluded that employed wives whose husbands had retired experienced lower marital quality compared to those whose circumstances aligned with their husbands'. Furthermore, at least two studies conclude that a husband's retirement negatively affects the self-assessed health of working women. First, Müller and Shaikh (2018) analyze several European countries and find that a husband's increased engagement in health-risk behaviors, such as higher consumption of alcohol or cigarettes, negatively impacts his wife's self-reported health status. Similarly, Bertoni and Brunello (2017) concluded that a husband's retirement adversely affects his wife's subjective health, in this case due to increased economic distress. Regarding effects on overall life satisfaction, Atalay and Barrett (2022) found that a husband's involuntary retirement negatively affects the life satisfaction of working wives through increased financial hardship and reduced social interactions. Austen et al. (2022) further supports the view that a husband's retirement has negative implications for women's well-being, also due to decreased financial satisfaction.

Other, less common findings include those of Kettlewell and Lam (2022), who report null effects of either own or spouse's retirement on social support. However, they find spillover benefits of spousal retirement on life satisfaction for individuals with low prior levels of social support, although they do not perform analyses by gender. Messe and Wolff (2019) analyze the short-term effects of spousal retirement on self-assessed health among couples in France but find no significant effects. Picchio and Ours (2020) finds that husbands' retirement positively affects the mental health of both themselves and their partners in the Netherlands, while wives' retirement has no effect. Lastly, Austen et al. (2022) shows that, in the long run, women's retirement has negative implications for men's satisfaction with free time.

2.2. Retirement and life satisfaction

There are three main theories that link retirement and life satisfaction. The first one, known as the role theory, posits that the role loss associated with retirement will lead to feelings of anxiety and depression among workers. Specifically, individuals who are deeply committed to their work may perceive the loss of their central role as difficult to replace with new activities (Bell, 1978; Fry, 1992). This will ultimately result in a lower

self-reported satisfaction with life after retirement (Elwell and Maltbie-Crannell, 1981; Heybroek et al., 2015; Wang et al., 2011). However, being retired can also lead to the process of reawakening or strengthening other roles, such as the family member role or the community member role. In this sense, Riley and Riley (1994) characterize retirement as a role transition.

Opposite to role theory, continuity theory suggests that the continuity in identity and self-concept will dominate, resulting in no significant changes in the level of well-being upon retiring (Atchley, 1989; Heybroek et al., 2015; Wang et al., 2011). In other words, continuity theory establishes that individuals can accommodate to life changes without experiencing stressful disruption. As individuals undergo anticipatory experiences prior to the actual role change and prepare accordingly, continuity theory de-emphasizes the negative aspects of retirement (Bell, 1978). For these reasons, this theory predicts that the retirement adjustment experience will be satisfactory and individuals will maintain their life satisfaction levels across the transition (Wang et al., 2011).

Furthermore, set-point theory addresses the adjustment to retirement within the framework of the life course perspective. This hypothesis posits that the retirement adjustment process culminates after a period of time. According to set-point theory, individuals maintain stable yet varying levels of subjective well-being over time, primarily influenced by personality traits or factors inherited or established early in life. During adulthood, subjective well-being is expected to remain relatively unchanged. While major life events can cause deviations from the set-point, these effects are typically temporary, with well-being returning to its baseline level after some time (Lykken and Tellegen, 1996).

All three main theories generalize the potential impacts of retirement on individual well-being. However, empirical research on the association between retirement and life satisfaction supports the view that adjustment to this transition largely depends on individual circumstances and available resources. In this sense, most investigations in the field report heterogeneous results depending on factors such as the reasons for retirement, health status, education level, and socioeconomic and demographic characteristics.

For instance, Heybroek et al. (2015) studied changes in life satisfaction across the entire retirement transition in Australia. They concluded that individuals with poorer health and limited access to a range of social and economic resources experienced significant declines in life satisfaction. Similarly, Hershey and Henkens (2014) found heterogeneous impacts depending on the reasons for retirement. Specifically, individuals who retired voluntarily reported higher levels of life satisfaction compared to those who remained employed, while those who retired involuntarily (due to health or organizational reasons)

had the lowest life satisfaction scores. In the case of Germany, one of the earlier investigations is the one of Pinquart and Schindler (2007), which also supports the existence of heterogeneous impacts in the relationship between retirement and life satisfaction. Using the SOEP, they identified three main groups of people who experienced retirement differently based on their socioeconomic, demographic, and health characteristics. They concluded that resource-rich individuals are less likely to experience changes in life satisfaction following retirement.

Several studies have since utilized fixed-effects models to analyze the impact of retirement on individual well-being in Germany, typically using data the German Socioeconomic Panel (SOEP). For example, Merz (2018) employed a fixed-effects robust panel method to test the existence of anticipation and long-term effects of retirement on life satisfaction using lag and lead variables. They showed that pursuing hobbies or living with children under 19 years old contributed to increased life satisfaction even many years after retirement, challenging the predictions of set-point theory. Furthermore, Bonsang and Klein (2012) analyzed the effects of retirement on various well-being measures utilizing a standard FE estimator. They concluded that the overall effect on life satisfaction is negligible, while satisfaction with free time increases and satisfaction with household income decreases. These findings support the predictions of continuity theory. However, their analysis is limited to men living in West Germany aged 50 to 70, which restricts the generalizability of their results. Lastly, Wetzel et al. (2016) found that life satisfaction increases in the short term after retirement, particularly among those who were previously unemployed. Over time, life satisfaction remained stable among retirees with higher education levels but declined among those with lower educational attainment.

2.3. Selection into retirement

There are numerous reasons that contribute to a worker's decision to retire at a particular point in time. For instance, when it comes to early retirement, there are selection factors that play a crucial role and must be carefully considered. Some workers may be unable to retire early due to restrictions imposed by their employers, while others may not meet the eligibility criteria of specific early retirement schemes. Moreover, the reasons for retiring vary widely, ranging from health concerns to the need to care for a spouse, or the physical demands of the current job. In summary, retirement decisions depend on several variables such as institutional policies, health status, the employment status of the spouse, among others. These factors make the retirement indicator inherently endogenous, since multiple

confounders influence the likelihood of retiring, some of which are not even captured in observational datasets.

I argue that previous longitudinal studies have lacked an empirical method capable of accounting for heterogeneous life course trajectories among individuals. While standard FE models address unobserved time-constant characteristics, they rely on the parallel trends assumption between treated and control groups to estimate causal effects. However, this assumption is both untestable and likely violated in the context of life course events, as individuals often exhibit differing trajectories of life satisfaction over time. This is supported by a large body of empirical research which shows the existence of heterogeneous effects of retirement on life satisfaction, largely determined by the circumstances surrounding retirement and individual resources. Therefore, an alternative methodological approach is necessary.

Fixed-effects individual slopes (FEIS) models provide an opportunity to account for selection based on heterogeneous life course trajectories. In their study on the effect of marriage on life satisfaction, Gattig and Minkus (2021) argue that the standard FE estimator may be biased if individuals who are happier in relationships are more likely to get married. To address this, the authors used relationship duration as the slope variable capturing happiness in a relationship to estimate their FEIS models. Similarly, Ludwig and Brüderl (2018) employed FEIS and found that the marital wage premium for men becomes statistically insignificant once individual-specific wage growth trajectories are accounted for. Methodologically, FEIS can be seen as a model that implements a long-standing plea of life course researchers. While standard FE assumes identical life courses that differ only by a constant, FEIS allows for individual-specific trajectories that vary widely, thereby relaxing the parallel trends assumption. This represents another significant contribution of this paper.

3. Institutional Context

The German public pension system covers approximately 90% of the workforce[3] and plays a significant role in providing financial security for the elderly. Pension benefits account for about two-thirds of gross income of the old adults (Börsch-Supan and Wilke, 2004). This includes old-age pensions, disability pensions, and survivors' benefits. The

[3]There are a few groups of workers exempt from compulsory insurance: civil servants have a separate tax-financed, non-contributory defined benefit scheme; and most of the self-employed are not compulsorily insured (Börsch-Supan and Wilke, 2004).

system is financed through a pay-as-you-go scheme and maintains a strong contributory link. The calculation of pension benefits is based on a points system and depends on the entire working history. Under this system, a year's contribution at the average earnings of contributors earns one pension point. Moreover, pension points can be acquired during other insurance periods, such as certain types of unemployment, child raising, and informal care provision. Pension benefits are roughly proportional to an individual's average lifetime earnings and feature few redistributive properties. Workers become eligible for the regular old-age pension upon completing five years of pension contributions and reaching the statutory retirement age (SRA). However, retirement before the SRA is possible under certain conditions, albeit with permanent deductions (Barschkett et al., 2022; Börsch-Supan and Wilke, 2004; Geyer and Welteke, 2019).

Throughout the years, the minimum age to make a worker eligible for regular pension payments in Germany has varied greatly, with differences depending on whether the worker is a man or a woman. In general, Brussig (2023) shows that the SRA has gradually increased for both male and female workers. According to Table A1, until 2012, the regular old-age pension regime's (Regelaltersrente) retirement age was 65 years for individuals born before 1947 (Techniker Krankenkasse, 2024). From there, the SRA increased by 1 month for each following birth cohort until it reached 66 years for those born in 1958 in 2024. The SRA will continue to increase by 2 months for each subsequent birth cohort, until it reaches 67 years for those born in 1964 by 2031.

The working conditions and retirement patterns among couples in Germany have shifted significantly. In 1996, only 25% of couples aged 50 to 69 had both partners employed. Using data from the Microcensus 2018, Konzelmann et al. (2020) indicate that more than half of all couples in this age range now have both partners employed. Moreover, one in four couples in this group have both partners working full-time. In other words, dual-earner couples have become increasingly common.

Around one-third of these couples report retiring simultaneously, showing their tendency to view joint retirement as a shared life project. However, such coordination can result in significant deviations from the SRA, particularly for women, who are typically younger than their male partners. According to the 2018 Microcensus, only 21% of couples aged 50 to 69 have an age difference of less than one year, and in 64% of cases the man is older than the woman.

Nevertheless, the possibilities for early retirement in Germany have become more limited following the elimination of three early retirement schemes: the pension for women, the pension after unemployment, and the old age part-time employment pension. As a result,

the effective pension receipt age in Germany has increased for both men and women. For men born in 1943, the average pension receipt age was 63.3 years, compared to 64.5 for those born in 1954. Women exhibit a similar trend, though from a lower starting point. For female workers born in 1943, the average pension receipt age was 62.9 years, increasing to 64.5 years for those born in 1954 (Brussig, 2023). Therefore, in recent years, effective retirement ages have converged toward the statutory retirement age.

4. Hypotheses

Building on theory, prior research, and the institutional context, I propose the following hypotheses. First, most empirical investigations conclude that the direction of the effect between retirement and life satisfaction depends on circumstances surrounding the transition, as well as sociodemographic and economic factors such as health status, education, and income level. However, studies such as those by Wetzel et al. (2016) or Merz (2018) show the existence of an overall positive impact of retirement on life satisfaction using the SOEP and longitudinal methods, albeit short-term except for specific subgroups. This increase could happen due to increased satisfaction with free time (as shown by Bonsang and Klein (2012)), or due to increased time spent with friends, relatives, or pursuing hobbies that are interesting to each individual. Consequently, I argue that retirement has an overall positive effect on self-reported life satisfaction.

- *Hypothesis 1*: The overall effect of retirement on life satisfaction is positive.

Regarding spousal retirement, the principle of linked lives within the life course perspective suggests that a partner's retirement should influence an individual's well-being. Although this effect has not been extensively studied, existing evidence points to clear gendered and timing effects, depending on whether the husband or wife retires, and whether the other individual is already retired or not. Moreover, the effect often depends on power dynamics within the relationship, since retirement alters the time couples spend together and may shift the balance of power (Bengston et al., 2005; Luhmann et al., 2014; Szinovacz and Davey, 2005). This is particularly relevant in traditional arrangements, where men's retirement can lead to interference in women's traditional domain, the household. Concerning timing, Szinovacz and Davey (2005) argues that joint retirement offers the most favorable outcome, as it stabilizes power dynamics and allows both spouses to adapt to the new situation together, but this hypothesis remains untested in prior longitudinal studies.

In cases of asynchronous retirement, there is substantial evidence of negative effects when the husband retires before his wife. For instance, Atalay and Barrett (2022) and Austen et al. (2022) find that a husband's retirement negatively affects the self-reported life satisfaction of working wives due to increased economic distress. Similarly, Müller and Shaikh (2018) and Bertoni and Brunello (2017) report a negative effect on subjective health indicators, attributed to increased engagement in health-risk behaviors and decreased financial satisfaction, respectively. Moen et al. (2001) also finds that employed wives whose husbands had already retired report lower marital quality compared to those whose retirement timing was aligned.

In addition, Szinovacz and Davey (2005) argues that changes in relative resources and mutual dependence may reduce men's life satisfaction when they retire and their wives remain employed, as this challenges the traditional male breadwinner role. Overall, existing evidence and theory point to a generally negative effect of spousal retirement on life satisfaction for both women and men, particularly when the husband retires and the wife continues to work. In the German context, where approximately two-thirds of couples do not retire simultaneously and men are typically older than their wives, the following hypotheses are proposed:

- *Hypothesis 2a*: The overall effect of spousal retirement on life satisfaction is negative.
- *Hypothesis 2b*: The effect of spousal retirement on life satisfaction for women and men is more negative when the wife remains in the workforce and the husband retires.
- *Hypothesis 2c*: The overall effect of spousal retirement on life satisfaction is only positive when both spouses retire simultaneously.

5. Data

5.1. Data description

I utilize data from the German Socioeconomic Panel (SOEP) version 39. The SOEP is an ongoing longitudinal survey of private households in Germany that has been conducted since 1984, surveying around 25,000 individuals annually since 2010 (Lüthen et al., 2022). The survey covers a broad range of individual and household-level variables

including socioeconomic status, psychological and health indicators, satisfaction and worries, expectations, family background, and education. Additionally, the SOEP provides information on age, employment, income types (including pensions), as well as assets and debts.

5.2. Retirement definition

Using information on income types available in the SOEP, an indicator for retirement can be constructed based on whether individuals self-report receiving an old-age pension. This definition is widely used in the existing literature (Henning et al., 2023, 2024; Merz, 2018; Pinquart and Schindler, 2007). Therefore, in this investigation, an individual is classified as "retired" as soon as they begin receiving an old-age pension, and remains retired in all subsequent periods. The SOEP offers several advantages over other data sources, particularly its ability to track respondents both before and after retirement over extended periods. This feature enables robust longitudinal analyses across the retirement transition.

5.3. Life satisfaction

Since each individual has their own definition of well-being, estimating it solely based on observable characteristics, such as income, wealth, quality of social connections, or health status would be challenging. For this reason, subjective well-being, defined as self-reported life satisfaction, serves as a variable that aggregates multiple dimensions of life and reflects an individual's judgment of their overall quality of life. When asked to report their life satisfaction, individuals undergo a cognitive exercise. They evaluate what constitutes a good life, consider which life dimensions are important to them, and then rank their life according to this judgment process, thus freeing researchers from the difficult task of defining these dimensions (Helliwell et al., 2012; Stiglitz et al., 2010).

Some critiques highlight measurement and adaptation issues with this indicator (Sen, 1985; Stewart, 2014). For instance, interpretation may vary depending on the wording of the question or whether the item elicits an affective or cognitive evaluation, especially across cultures. Moreover, life satisfaction has been shown to depend partially on individuals' local reference groups (Kingdon and Knight, 2007; Knight and Gunatilaka, 2011). Despite these concerns, self-reported life satisfaction remains widely used in the literature, and the OECD (2013) recommends it as a measure of overall subjective well-being. In

the SOEP, life satisfaction is measured by the single item "How satisfied are you with your life, all things considered?" Respondents are asked to rate using an 11-point Likert scale, where 0 represents complete dissatisfaction and 10 complete satisfaction.

5.4. Analytical sample

In this investigation, I utilize a longitudinal sample obtained through the following steps. Out of the 91,881 unique individuals in the SOEP, 9,119 are excluded because their interviews were conducted before 1995, the first year the survey included the old-age pension income question. An additional 66,207 unique observations are dropped to restrict the sample to those aged 60 to 70. Furthermore, 4,958 individuals are removed from the analysis due to missing data on key variables: life satisfaction, gender, annual doctor visits, education level, or household net income. A total of 764 individuals are excluded to limit the sample to straight, married couples. Next, I exclude 7,353 individuals who were already retired when they entered the sample or whose partner was already retired. Finally, I exclude 1,011 individuals with fewer than three person-years of complete information on all variables. A minimum of three years of valid data on life satisfaction and covariates is required given that the FEIS models include both an individual intercept and individual slopes for the number of annual doctor visits.

The final sample consists of 2,469 unique individuals and a total of 18,355 person-years. Descriptive statistics are presented in Table 1. The average self-reported life satisfaction is higher among retired observations. Moreover, retired person-years show a higher average number of annual doctor visits compared to non-retired person-years, which is consistent with the fact that individuals tend to be older once they enter retirement. The net household income per capita is higher for non-retired person-years.

Regarding time-invariant characteristics, the share of men in the sample is higher than that of women. Furthermore, the majority of individuals were born between 1951 and 1960, reflecting the sample selection and the data collection period of the SOEP. More than half of the sample completed high school, while approximately a third attained an education level higher than high school. Lastly, the proportion of respondents living in former West Germany is greater than that of those residing in former East Germany.

Table 1: Summary statistics

	Non-retired	**Retired**	**Overall**

Variable	N=8756	N=9599	N=18355;N=2469
Time-varying			
Life satisfaction (0-10)	7.35 (1.65)	7.41 (1.58)	7.38 (1.61)
Annual doctor visits	10 (16)	11 (15)	11 (15)
HH income (per capita)	1,659 (1,511)	1,474 (983)	1,563 (1,266)
Time-invariant			
Gender			
Female			840 (34%)
Male			1,629 (66%)
Birth cohort			
1925-1935			88 (3.6%)
1936-1945			808 (33%)
1946-1950			492 (20%)
1951-1960			1,081 (44%)
Education level			
Less than HS			229 (9.3%)
High school			1,339 (54%)
More than HS			901 (36%)
Place of residence			
East Germany			626 (25%)
West Germany			1,843 (75%)

Note: Mean (SD) for continuous variables; N (%) for categorical variables.

6. Empirical Strategy

I employ two different methods to study the relationship between retirement and life satisfaction. The first is a standard fixed-effects model, which utilizes panel data and a treatment variable that varies across individuals and over time. The second is a fixed-effects individual slopes (FEIS) model, which accounts for heterogeneous slopes and trends across units, thereby relaxing the parallel trends assumption.

6.1. Fixed-effects

To estimate the effect of retirement on life satisfaction for couples in Germany, the SOEP dataset allows panel estimations. This estimation approach is preferred to pooled ordinary least squares (POLS), as it deals with unobserved time-invariant heterogeneity between individuals. In the case of variables that capture well-being, such as self-reported life satisfaction, this adjustment is essential, since more than 50 percent of the variation in subjective well-being is explained by personality traits (Pagán, 2013). For instance, personality may shape an individual's interpretation of what constitutes an excellent life satisfaction score. These unobserved and time-invariant individual effects are otherwise difficult to capture and can lead to inefficient or biased estimates in a POLS regression.

To account for all time-invariant individual characteristics, the fixed-effects (FE) approach relies exclusively on within-individual variation over time. As such, I estimate the effect of retirement on life satisfaction using the variation among individuals who transitioned from employment to retirement during the observation period in the panel sample (ages 60 to 70). The estimated effects capture the average impact on life satisfaction of the change in employment status controlling for unobserved time-invariant heterogeneity. Moreover, by using FE, it is not needed to specify time-invariant sociodemographic characteristics in the regression such as gender, birth cohort, education level, or place of residence. Hence, satisfaction with life is estimated by the following equation:

$$Y_{it} = \alpha_{1i} + \beta R_{it} + \alpha_2 A_{it} + \lambda_t + \epsilon_{it} \tag{1}$$

Where Y_{it} represents the self-reported overall life satisfaction, which ranges from 0 to 10 and varies over time and between individuals. R_{it} denotes the treatment status, which takes value 0 before retirement and 1 afterward. A_{it} is the self-reported number of annual doctor visits. α_{1i} represents the individual-specific constant that does not vary over time but differs between individuals, as indicated by the subscript i. In other words, this term captures all time-invariant characteristics that influence an individual's life satisfaction in the same manner over time. Lastly, λ_t represents survey year fixed-effects, and ϵ_{it} is the idiosyncratic error term. To estimate the impact of partner retirement on life satisfaction, Equation 2 includes the variable P_{it}, which takes value 0 before partner retirement and 1 afterward.

$$Y_{it} = \alpha_{i1} + \beta P_{it} + \alpha_2 A_{it} + \lambda_t + \epsilon_{it} \tag{2}$$

It is important to note that retirement and partner retirement transitions can occur simultaneously, as these events are not mutually exclusive. To identify potential heterogeneous effects depending on whether the individual is working while their partner enters retirement, vice versa, or both spouses transition to retirement at the same time, Equation 3 includes both retirement and partner retirement indicators, as well as an interaction term. In this equation, β represents the effect of the partner transitioning to retirement while the individual is still working, δ captures the effect of the individual transitioning to retirement while the partner is still working, and γ denotes the additional effect that activates only when both the individual and their spouse enter retirement.

$$Y_{it} = \alpha_{1i} + \beta P_{it} + \alpha_2 A_{it} + \delta R_{it} + \gamma(P_{it} * Xit) + \lambda_t + \epsilon_{it} \tag{3}$$

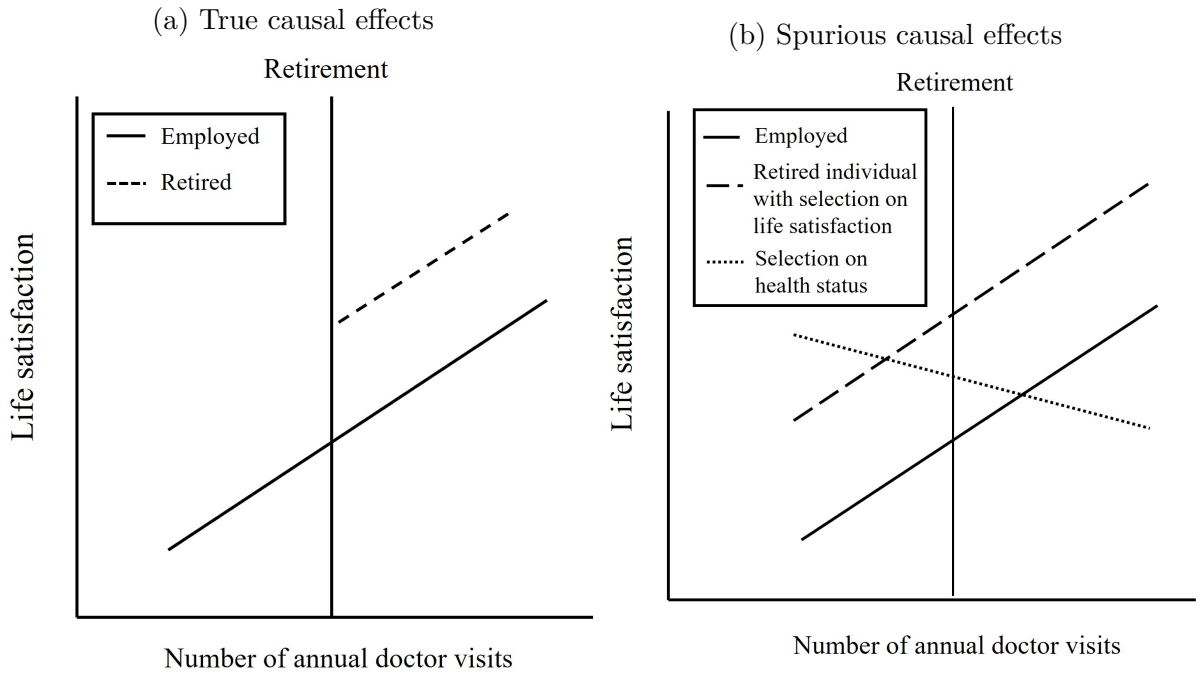
6.2. Fixed-effects Individual Slopes

For a FE model to yield true causal effects, the treatment indicator must be strictly exogenous. In addition to the absence of omitted variable bias, this also requires that the parallel trends assumption holds. In Figure 1a, the dashed line runs parallel to the solid reference line, indicating that, while the life satisfaction of individuals who retired and those who never retired may differ in levels, they grow at the same rate. In other words, the life satisfaction scores would have evolved in parallel in the absence of the treatment (Ludwig and Brüderl, 2018).

However, the parallel trends assumption is violated in the presence of selection on another variable that affects both life satisfaction and retirement, such as health status (Figure 1b, short-dashed line). In other words, individuals with poorer health are more likely to retire (Hershey and Henkens, 2014; Heybroek et al., 2015). Specifically, individuals in poor health who retire are not only more satisfied with life compared to employed individuals at the time of retirement, but also show a declining trajectory of their life satisfaction over time as their health status deteriorates further. According to Rüttenauer and Ludwig (2023), this leads to bias in standard FE estimators.

By accounting for heterogeneous slopes and trends, fixed-effects individual slopes (FEIS) models can overcome this problem. Unlike FE, the data are not person "demeaned" but "de-trended" using the predicted individual slope of each person. This relaxes the assumption of parallel trends between treated and untreated groups and thus allows for the estimation of the causal impact of retirement and partner retirement on life satisfaction (Brüderl and Ludwig, 2015; Rüttenauer and Ludwig, 2023; Wooldridge, 2010).

Figure 1: Effect of retirement on life satisfaction



Own illustration based on Ludwig and Brüderl (2018) and Gattig and Minkus (2021).

In this study, I use the number of annual doctor visits as the slope variable for the FEIS models. Individuals with more frequent doctor visits generally exhibit poorer health, which in turn may lead them to retire earlier compared to healthier individuals. This is supported by Figure A1, which shows that the average effective pension receipt age decreases as doctor visits increase among older adults in the sample. Moreover, individuals in poorer health may select into partner retirement, as they might depend on their partners for care. Although self-reported, the number of doctor visits has been widely used in the literature as an objective indicator of health status (Bonsang and Klein, 2012; Gorry et al., 2018; Merz, 2018). I estimate the following FEIS models:

$$Y_{it} = \alpha_{1i} + \beta R_{it} + \alpha_{2i} A_{it} + \lambda_t + \epsilon_{it} \tag{4}$$

$$Y_{it} = \alpha_{1i} + \beta P_{it} + \alpha_{2i} A_{it} + \lambda_t + \epsilon_{it} \tag{5}$$

$$Y_{it} = \alpha_{1i} + \beta P_{it} + \alpha_{2i} A_{it} + \delta R_{it} + \gamma (P_{it} * Rit) + \lambda_t + \epsilon_{it} \tag{6}$$

Where Y_{it} represents the self-reported overall life satisfaction for individual i in time t. In Equation 4, R_{it} denotes the treatment status, which takes value 0 before retirement and 1 afterward, while A_{it} is the number of annual doctor visits for individual i at time t. In Equation 5, the term P_{it} represents the partner retirement indicator, which takes value 0 before partner retirement and 1 afterward. Moreover, in Equation 6, the coefficient γ captures the additional effect of joint retirement. The models differ from the previous equations in that the slopes of the life satisfaction trajectories α_{2i} vary across individuals, as indicated by the subscript i. If we estimated a standard FE model, de-meaning would eliminate α_{1i}, but not α_{2i}. Thus, the FE estimate of β in Equation 4, for instance, will be biased downward if individuals with decreasing life satisfaction are more likely to retire.

The procedure to estimate the FEIS models is straightforward. (1) For each person i, estimate the individual life satisfaction trajectory by an OLS regression on a constant and the number of annual doctor visits. (2) Obtain the residuals, which represent the detrended life satisfaction scores of person i. (3) Repeat steps (1) and (2) for all covariates. (4) Pool the resulting data and estimate an OLS regression. Note that FEIS estimation is "data hungry" because it requires at least $J+1$ person-years per individual to estimate the life satisfaction profile in step (1), where J is the number of individual slope parameters plus the individual intercept. Since these FEIS models use only one slope variable plus the intercept, at least three observations per person are required (Ludwig and Brüderl, 2018).

The conventional FE model is a special case of the FEIS model, in which unobservables related to retirement are captured by the individual intercepts (which do not interact with the number of annual doctor visits).[4] As a consequence, if selection operates only on life satisfaction levels, FE and FEIS produce identical point estimates. In my analyses, I compare results of the FEIS models with those obtained from FE and pooled ordinary least squares (POLS) to assess the magnitude of the selection bias. I argue that FEIS is better suited for life course research, given that standard FE assumes identical life courses that only differ by a constant, whereas FEIS allows for individual trajectories that may vary widely.

It is important to note that FEIS does not fully address all sources of selection. First, it does not account for time-varying shocks or unobserved heterogeneity. In the context of the relationship between retirement and life satisfaction among couples, relevant unobservables may include marital quality, anticipatory effects, and behavioral adaptations upon retirement. Although unlikely, personality changes in some individuals could also

[4]In this sense, if no slope variables are specified, then the FEIS model is equivalent to a standard FE.

play a role. Moreover, FEIS does not address selection into marriage, remaining married, or labor force participation. Despite these limitations, it remains a preferred approach over traditional FE models.

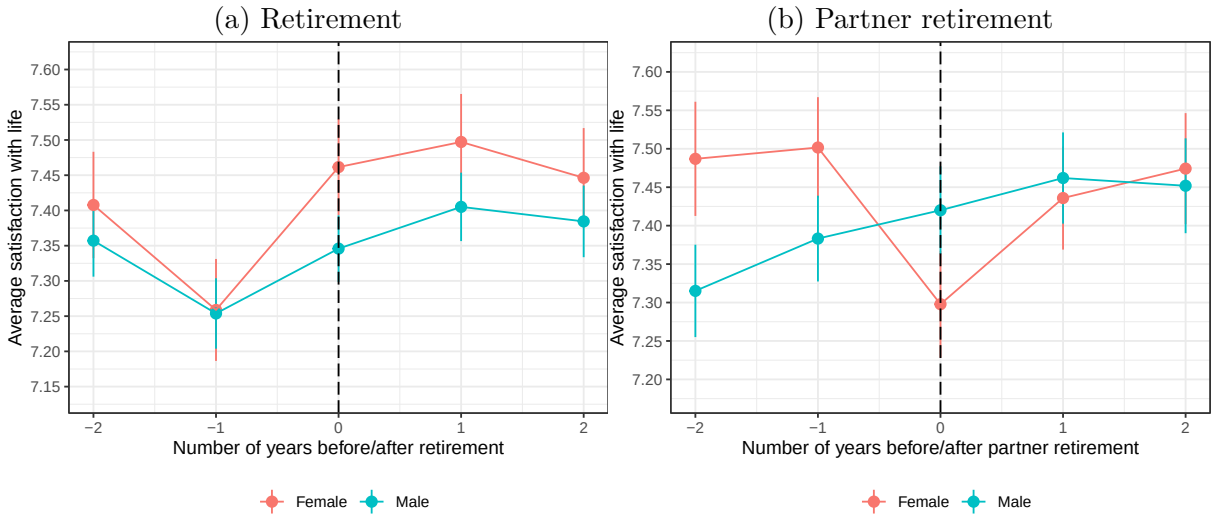
7. Results and Discussion

7.1. Descriptive findings

Figure 2 presents the evolution of the average self-reported life satisfaction of individuals in the sample throughout the retirement transition by gender. The plots display a descriptive event-study analysis by gender for the two years before and after retirement or partner retirement. This analysis omits the control group of workers who did not retire until age 70. Before retirement, women and men show similar trends in average life satisfaction. One year prior to the event, the average life satisfaction for both groups is nearly identical, at approximately 7.25. In the year of retirement, the average life satisfaction of both women and men increases, with a more significant increase observed in women compared to men (0.2 increase versus 0.1). This provides initial evidence indicating an overall positive effect of individual retirement on self-reported life satisfaction. By the second year after retirement, life satisfaction decreases slightly for both groups but remains higher than pre-retirement levels. The differences between these point estimates are not statistically significant within the analyzed timeframe.

In the case of partner retirement, women and men exhibit very different life satisfaction trajectories. First, women show significantly higher levels of average life satisfaction two years before spousal retirement. However, the most pronounced difference occurs during the spousal retirement period. While women experience a drop of approximately 0.2 in life satisfaction, men exhibit a slight increase of about 0.1. Although women's life satisfaction improves one year after partner retirement, the plot provides clear evidence indicating a gendered transition, in which spousal retirement may negatively affect women while positively impacting men.

Figure 2: Evolution of average life satisfaction by gender



Notes: 1/.The overall life satisfaction is reported on a scale from 0 (complete dissatisfaction) to 10 (complete satisfaction). 2/.The vertical lines crossing each point represent the 95% CI.
Source: SOEP v39. N = 8,136 person-years (retirement) and N = 6,437 person-years (partner retirement).

7.2. Regression analysis

7.2.1. Overall sample

Figure 4 presents the estimation results for the effect of retirement and partner retirement on life satisfaction. The first coefficient corresponds to the POLS model, including the retirement binary indicator and the following covariates: annual number of doctor visits, gender, birth cohort, place of residence (former East or West Germany), and education level. In this specification, retirement is associated with an average increase of 0.17 in life satisfaction. This estimate is statistically significant. Although this model controls for relevant sociodemographic characteristics, its estimates are biased due to the presence of several time-invariant unobserved variables that could potentially confound the relationship between retirement and life satisfaction. Such variables include personality traits, socioeconomic status, social support networks, among others. Moreover, individuals select into retirement, making it a non-random event. In the standard FE model, retirement is associated with an average increase of 0.13 in self-reported life satisfaction. This coefficient is statistically significant.

The standard FE model assumes that differences in life satisfaction trajectories between

individuals are only due to a fixed intercept shift. In other words, individuals start at different baseline levels but follow the same trajectory over time, apart from the treatment effect. In contrast, FEIS allows each individual to have their own slope with respect to the annual number of doctor visits, thereby controlling for systematic differences in how life satisfaction changes with health deterioration over time. In this sense, a non-significant effect of retirement on life satisfaction in an FEIS model would indicate that the FE model was attributing selection on health-status trajectories to the retirement effect. This would provide strong evidence against a causal effect of retirement on life satisfaction (see Ludwig, 2018, for a similar application to the marital wage premium).

If the FEIS estimator differs in size from the FE estimator, it suggests not only selection of individuals in poor health into retirement, but also additional selection of individuals whose life satisfaction declines over time due to health reasons. In this case, the FEIS model produces a coefficient similar in sign to the FE model. The estimate is slightly higher (0.15), potentially indicating the presence of additional selection omitted by the standard FE model. Nonetheless, the effect sizes are comparable, and statistical significance remains robust. As expected, the overall impact of retirement on life satisfaction is positive and highly significant in all models, supporting *Hypothesis 1.*

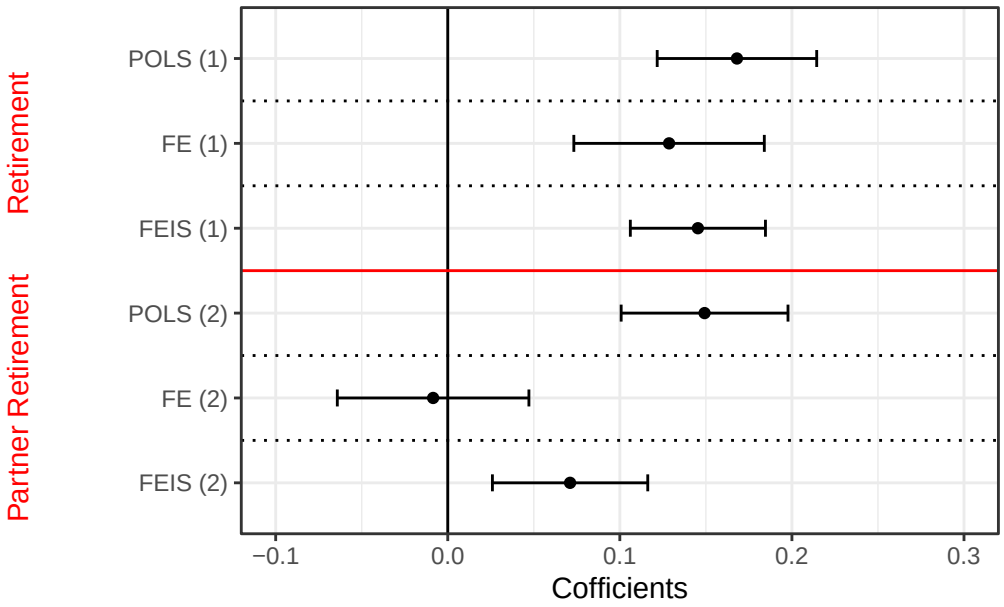
The last three estimates in the plot correspond to the partner retirement models. In the POLS model, partner retirement is associated with an average increase of 0.15 in self-reported life satisfaction. This estimate is statistically significant. In the two-way FE model, partner retirement is associated with an average decrease of 0.01 in life satisfaction, but this coefficient is not statistically significant. In contrast, the FEIS estimate differs notably from the FE estimate. In the FEIS specification, partner retirement is associated with a significant increase of 0.07 in life satisfaction. This suggests that, after accounting for individual life satisfaction trajectories influenced by health status, partner retirement has a positive effect that was not captured by FE. This result does not support *Hypothesis 2a.*

In summary, the results from the FE models confirm that retirement positively impacts life satisfaction. The FE estimations deal with the unobserved time-invariant heterogeneity at the individual level, and as such, factors such as personality traits, motivation, occupational characteristics of the worker, among others, are accounted for. Consequently, these estimates are less prone to bias compared to the POLS estimations and address the issue of selection into retirement. Furthermore, the FEIS estimator yields a slightly larger effect size than the FE estimator, potentially indicating selection of individuals

whose life satisfaction declines over time due to health reasons into retirement. However, this additional source of bias does not contradict the findings of the FE model.

On the contrary, the coefficient associated with partner retirement in the FE model is not statistically significant. This suggests that, even after accounting for selection into spousal retirement, there appear to be no intra-household spillover effects. However, the FEIS estimator reveals a positive and statistically significant effect size of 0.07. Following Gattig and Minkus (2021) and Ludwig and Brüderl (2018), this indicates that, once individuals are allowed to have different life satisfaction slopes depending on their health status, partner retirement has a positive impact on life satisfaction.

Figure 4: Effect of retirement and partner retirement on life satisfaction



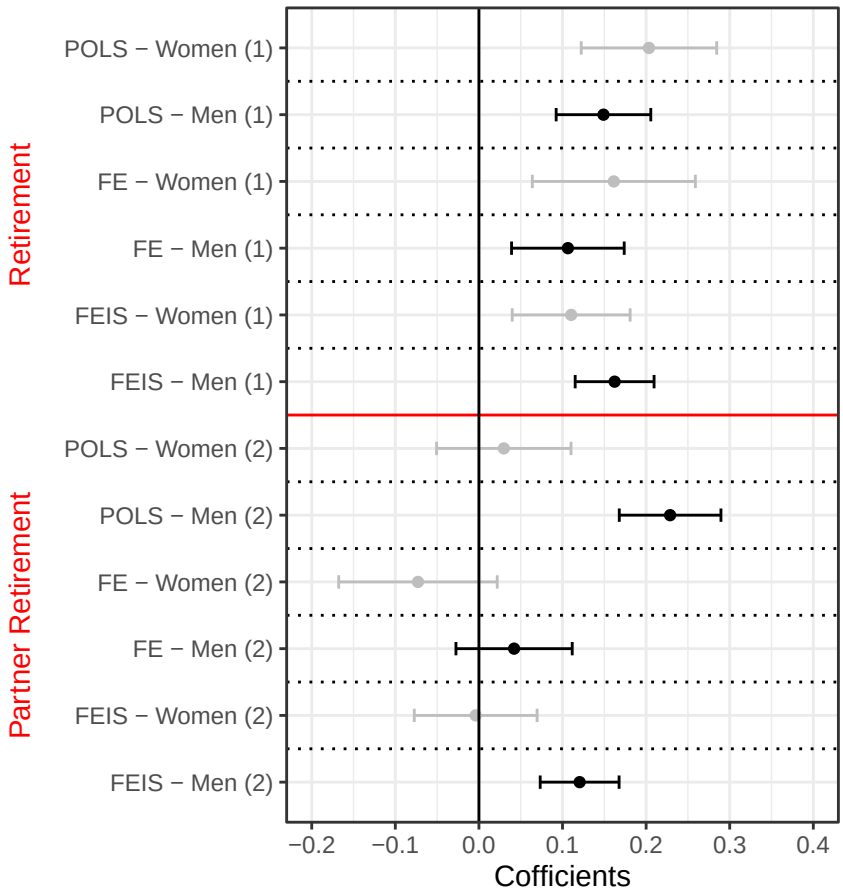
Source: SOEP v39. N = 18,355 person-years.

7.2.2. Analysis by gender

Figure 5 presents the results of the retirement and partner retirement models by gender. In the POLS model, retirement is associated with an average increase of 0.2 in self-reported life satisfaction for women, compared to an increase of 0.15 for men. In the FE model, retirement leads to an increase of 0.16 in women's life satisfaction and 0.11 in men's life satisfaction. The FEIS model indicates an increase of 0.11 in satisfaction with life for women and 0.16 for men. All coefficients are statistically significant. In the FEIS model, the retirement effect for men is notably larger than that for women, while the opposite pattern appears in the FE model. This suggests that accounting for

individual life satisfaction slopes by health status reveals a larger positive effect for men but a smaller effect for women, implying that men whose health deteriorates over time benefit more from retirement than women. Overall, there is no conclusive evidence that either group benefits consistently more from retirement.

Figure 5: Effect of retirement and partner retirement on life satisfaction by gender



Source: SOEP v39. N = 18,355 person-years.

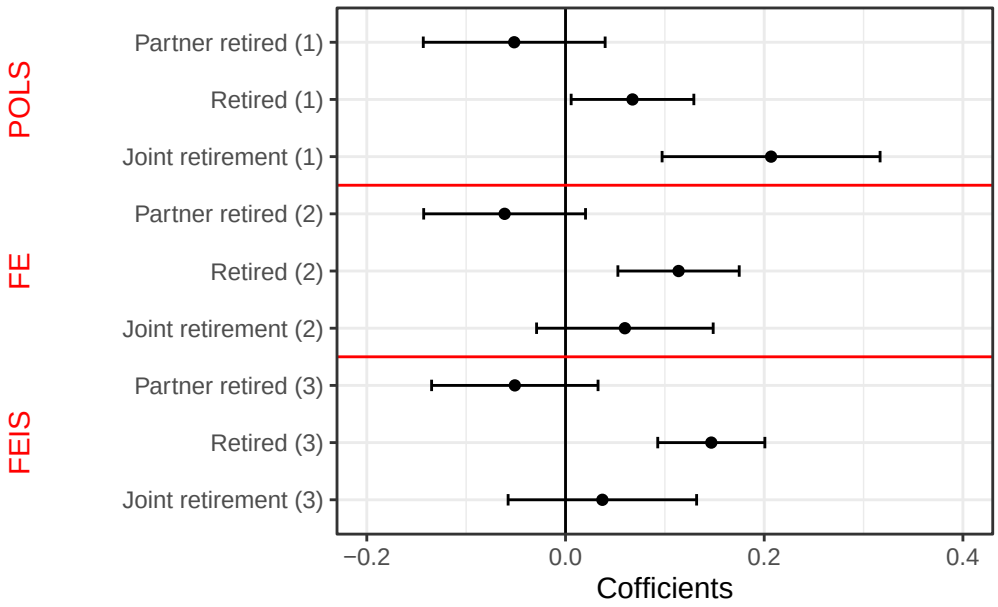
Regarding partner retirement, the POLS model indicates an increase of 0.03 in life satisfaction for women and 0.23 for men, with only the latter being statistically significant. In the FE models, women experience a decline of 0.07 in life satisfaction following their spouse's retirement, while men's life satisfaction increases by 0.04; but neither estimate is statistically significant. In the FEIS models, partner retirement has no effect for women but produces a significant and sizable increase of 0.12 for men. This suggests that, after accounting for heterogeneous life satisfaction trajectories by health status, partner retirement benefits men but not women. In other words, men whose health deteriorates over time appear to gain from their wife's retirement, whereas women are unaffected by their husband's retirement. Overall, the partner retirement models by gender indicate that men benefit more from partner retirement and drive the overall positive effect observed

in the FEIS model.

7.2.3. Retirement timing

Figure 6 presents the interaction model, which disentangles retirement timing effects. In the POLS model, retiring while the spouse remains in the workforce is associated with a significant increase of 0.07 in life satisfaction, while joint retirement yields a substantial increase of 0.21. Both estimates are statistically significant. In the FE model, however, only retiring while the spouse remains employed produces a positive and significant effect of 0.11, with spousal retirement and joint retirement showing no effects. The FEIS model corroborates this pattern, yielding an estimate of 0.15 for individual retirement. The absence of a robust effect for joint retirement does not support *Hypothesis 2c*.

Figure 6: Effect of retirement timing on life satisfaction

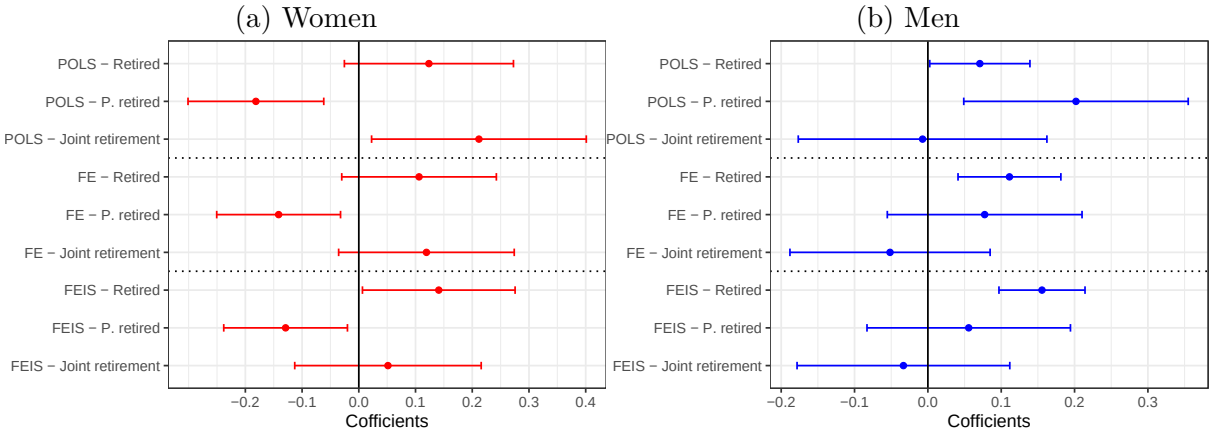


Source: SOEP v39. N = 18,355 person-years.

Finally, Figure 7 presents the retirement timing effects by gender. For women, retiring while the husband remains in the workforce has no effect in any model except the FEIS specification, where individual retirement leads to a significant increase of 0.14 in life satisfaction. The most consistent finding for women is that they are negatively affected by their spouse's retirement if they remain in the workforce. This effect is robust, ranging from –0.18 in the POLS model to –0.13 in the FEIS model, is consistent with prior findings, and supports *Hypothesis 2b*. Joint retirement affects women's life satisfaction only in the POLS model, providing no support for *Hypothesis 2c*.For men, the opposite

pattern emerges: they experience a substantial and robust increase in life satisfaction following their own retirement while their wives remain in the workforce. This effect ranges from 0.07 in the POLS model to 0.16 in the FEIS model. Overall, the evidence indicates that retirement timing strongly moderates the effects of both individual and spousal retirement.

Figure 7: Effect of retirement timing on life satisfaction by gender



Source: SOEP v39. N = 18,355 person-years.

7.3. Robustness

7.3.1. Time-varying covariates

Although FEIS controls for additional sources of selection compared to standard FE models and does not require the parallel trends assumption, it does not account for time-varying shocks. To address this, the logarithm of household per capita income is included as a time-varying covariate. Table A5 presents the results of all main models. Overall, the retirement and partner retirement coefficients change only slightly with the inclusion of this covariate, showing no substantial differences in magnitude or statistical significance.

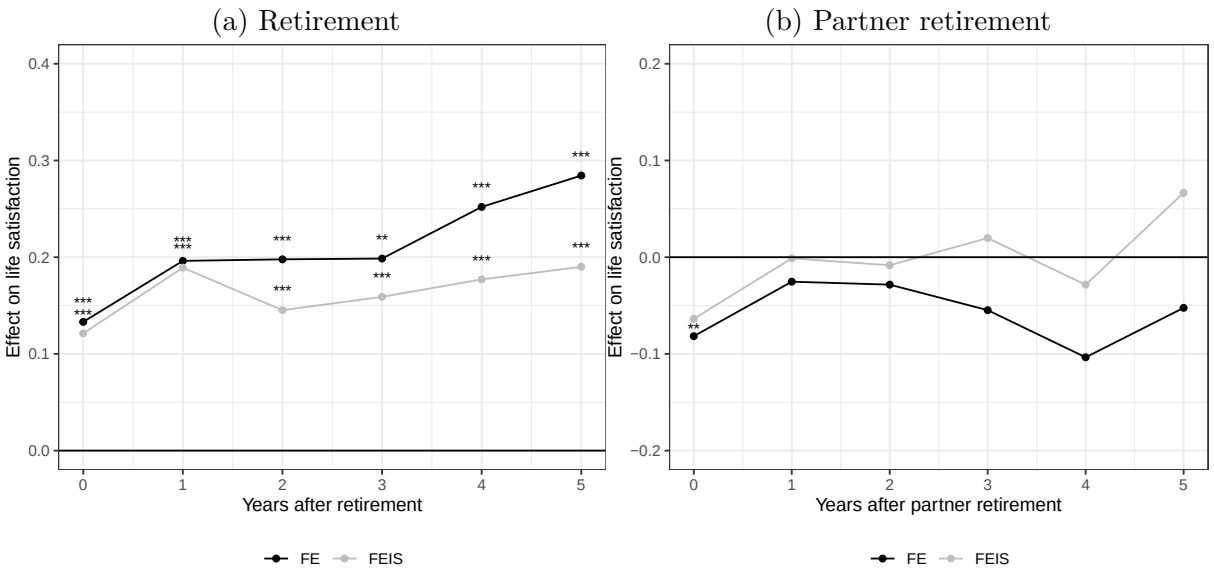
7.3.2. Long-term effects

Figure 9 presents the long-term effects of individual and spousal retirement on self-reported life satisfaction. These specifications include binary indicators for each period

before and after the event. These analyses omit the control group. Only years 0 to 5 following the event are shown in the plots, using the year prior to retirement or spousal retirement as the reference period.

Retirement has a positive and statistically significant effect on life satisfaction that persists for at least five years. In the FE model, the effect increases slightly over time, while the FEIS specification yields more stable estimates. For spousal retirement, most coefficients are negative, but only the coefficient for the year of the event in the FE model is statistically significant. This suggests that spousal retirement may reduce life satisfaction, though the effect is not persistent. These results may vary by gender and timing of the event, which strongly moderate the effect of spousal retirement.

Figure 9: Long-term effects of retirement and partner retirement



Notes: 1/. The FE and FEIS models include more time periods before and after retirement, but due to low sample sizes they are not displayed in the plots. 2/. The reference period is one year before retirement or spousal retirement. $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$.

8. Conclusions

This paper analyzes the impact of retirement and spousal retirement on life satisfaction among older adults in Germany utilizing data from the SOEP. Although previous studies have analyzed both events, most have focused on subjective or mental health measures rather than life satisfaction and have omitted a detailed heterogeneity analysis by timing

of the event. Moreover, the majority have relied on standard FE models, overlooking methodologies such as FEIS that account for heterogeneous life course trends.

One of the main findings of this paper is that retirement leads to a substantial increase in self-reported life satisfaction, a result that remains robust across all methodologies and model specifications. Regarding spousal retirement, only the FEIS models indicate an overall positive effect on life satisfaction, suggesting additional selection into partner retirement among individuals whose health status deteriorates over time that is not addressed by FE. The retirement models by gender show no clear differences, while the positive effect of spousal retirement appears to be driven by men. In terms of retirement timing, women are negatively affected when their husbands retire while they remain in the workforce, whereas the opposite occurs for men. Joint retirement appears to have no effect on life satisfaction.

In a country with an aging population like Germany, the government has already closed some early retirement schemes due to their widespread use. While such measures are necessary to ensure the sustainability of the public pension system, it is important to preserve early retirement options for individuals in poor health who need to exit the labor market. Moreover, spouses may sometimes choose to retire to care for a partner with deteriorating health, typically the husband. In such cases, partner retirement can significantly increase the well-being of the other spouse. This caregiving dimension of retirement should be recognized by the German pension system, particularly given the scarcity of elderly caregivers.

Future research could focus on studying mediation effects in the relationship between retirement or partner retirement and individual well-being. Additionally, it would be interesting to investigate the effect of retirement on various self-reported satisfaction variables included in the SOEP employing the methodologies presented in this paper. An alternative approach could involve examining the impact of retirement on self-reported life satisfaction among individuals who retire through disability or reduced-earning capacity pensions. This subgroup represents older adults who exit the labor force due to deteriorating health conditions, and as such the impact of retirement or partner retirement could potentially be larger.

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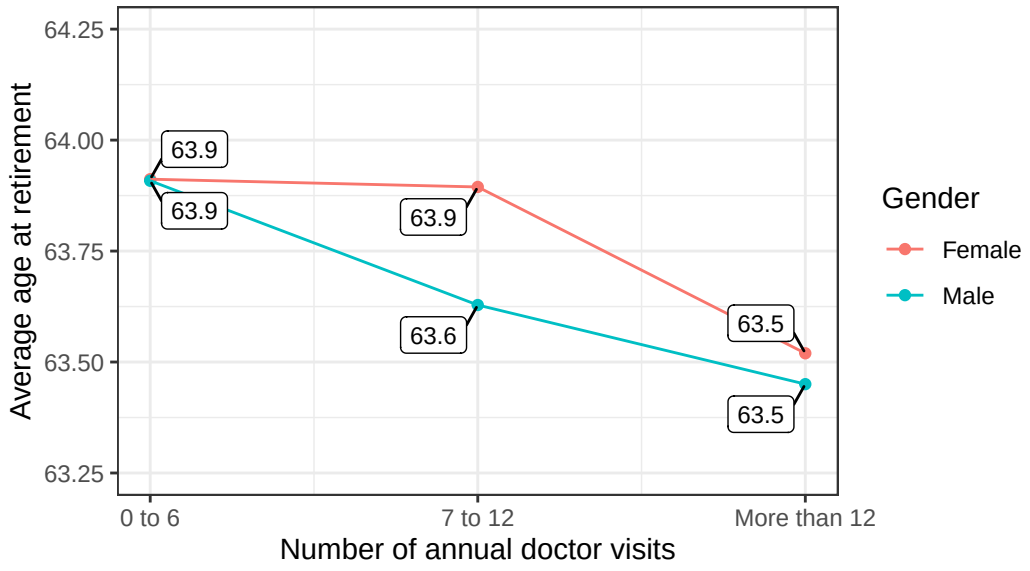
A. Appendix

Table A1: Regular SRA by birth cohort

Birth cohort	Regular SRA	Start of retirement period
1946 or before	65	Until 02/2012
1947	65+1 Month	02/2012-01/2013
1948	65+2 Months	03/2013-02/2014
1949	65+3 Months	04/2014-03/2015
1950	65+4 Months	05/2015-04/2016
1951	65+5 Months	06/2016-05/2017
1952	65+6 Months	07/2017-06/2018
1953	65+7 Months	08/2018-07/2019
1954	65+8 Months	09/2019-08/2020
1955	65+9 Months	10/2020-09/2021
1956	65+10 Months	11/2021-10/2022
1957	65+11 Months	12/2022-11/2023
1958	66	01/2024-12/2024

Source: Techniker Krankenkasse (2024)

Figure A1: Average effective age at first pension receipt by number of annual doctor visits



Source: SOEP v39.

Table A2: Effect of retirement and partner retirement on life satisfaction

	Dependent variable: Overall SWL (0-10)								
	POLS	FE	FEIS	POLS	FE	FEIS	POLS	FE	FEIS
Retired	0.17***	0.13***	0.15***				0.07*	0.11***	0.15***
	(0.02)	(0.03)	(0.02)				(0.03)	(0.03)	(0.03)
Partner retired				0.15***	−0.01	0.07**	−0.05	−0.06	−0.05
				(0.02)	(0.03)	(0.02)	(0.05)	(0.04)	(0.04)
Partner retired x Retired							0.21***	0.06	0.04
							(0.06)	(0.05)	(0.05)
Annual doctor visits	−0.02***	−0.01***		−0.02***	−0.01***		−0.02***	−0.01***	
	(0.00)	(0.00)		(0.00)	(0.00)		(0.00)	(0.00)	
Covariates	Yes	No	No	Yes	No	No	Yes	No	No
Slope vars.	-	-	Visits	-	-	Visits	-	-	Visits
R^2	0.08	0.01	0.00	0.08	0.01	0.00	0.08	0.01	0.00
Adj. R^2	0.08	−0.14	0.00	0.08	−0.14	0.00	0.08	−0.14	0.00
Num. obs.	18355	18355	18355	18355	18355	18355	18355	18355	18355
Num. groups: pid			2469			2469			2469
RMSE			1.03			1.03			1.03

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table A3: Effect of retirement and partner retirement on life satisfaction for women

	Dependent variable: Overall SWL (0-10)								
	POLS	FE	FEIS	POLS	FE	FEIS	POLS	FE	FEIS
Retired	0.20***	0.16**	0.11**				0.12	0.11	0.14*
	(0.04)	(0.05)	(0.04)				(0.08)	(0.07)	(0.07)
Partner retired				0.03	−0.07	−0.00	−0.18**	−0.14*	−0.13*
				(0.04)	(0.05)	(0.04)	(0.06)	(0.06)	(0.06)
Partner retired x Retired							0.21*	0.12	0.05
							(0.10)	(0.08)	(0.08)
Annual doctor visits	−0.02***	−0.01***		−0.02***	−0.01***		−0.02***	−0.01***	
	(0.00)	(0.00)		(0.00)	(0.00)		(0.00)	(0.00)	
Covariates	Yes	No	No	Yes	No	No	Yes	No	No
Slope vars.	-	-	Visits	-	-	Visits	-	-	Visits
R^2	0.06	0.01	0.00	0.06	0.01	0.00	0.06	0.02	0.00
Adj. R^2	0.06	−0.15	0.00	0.05	−0.15	−0.00	0.06	−0.15	0.00
Num. obs.	6171	6171	6171	6171	6171	6171	6171	6171	6171
Num. groups: pid			840			840			840
RMSE			1.06			1.06			1.06

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table A4: Effect of retirement and partner retirement on life satisfaction for men

	Dependent variable: Overall SWL (0-10)								
	POLS	FE	FEIS	POLS	FE	FEIS	POLS	FE	FEIS
Retired	0.15***	0.11**	0.16***				0.07*	0.11**	0.16***
	(0.03)	(0.03)	(0.02)				(0.03)	(0.04)	(0.03)
Partner retired				0.23***	0.04	0.12***	0.20**	0.08	0.06
				(0.03)	(0.04)	(0.03)	(0.08)	(0.07)	(0.07)
Partner retired x Retired							−0.01	−0.05	−0.03
							(0.09)	(0.07)	(0.07)
Annual doctor visits	−0.02***	−0.01***		−0.02***	−0.01***		−0.02***	−0.01***	
	(0.00)	(0.00)		(0.00)	(0.00)		(0.00)	(0.00)	
Covariates	Yes	No	No	Yes	No	No	Yes	No	No
Slope vars.	-	-	Visits	-	-	Visits	-	-	Visits
R^2	0.09	0.01	0.01	0.09	0.01	0.00	0.09	0.01	0.01
Adj. R^2	0.09	−0.14	0.00	0.09	−0.14	0.00	0.09	−0.14	0.00
Num. obs.	12184	12184	12184	12184	12184	12184	12184	12184	12184
Num. groups: pid			1629			1629			1629
RMSE			1.02			1.02			1.02

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table A5: Effect of retirement and partner retirement on life satisfaction with time-varying covariates

	Dependent variable: Overall SWL (0-10)								
	POLS	FE	FEIS	POLS	FE	FEIS	POLS	FE	FEIS
Retired	0.18***	0.14***	0.15***				0.09**	0.12***	0.15***
	(0.02)	(0.03)	(0.02)				(0.03)	(0.03)	(0.03)
Partner retired				0.15***	0.00	0.07**	−0.03	−0.05	−0.05
				(0.02)	(0.03)	(0.02)	(0.05)	(0.04)	(0.04)
Partner retired x Retired							0.17**	0.06	0.04
							(0.05)	(0.05)	(0.05)
Annual doctor visits	−0.02***	−0.01***		−0.02***	−0.01***		−0.02***	−0.01***	
	(0.00)	(0.00)		(0.00)	(0.00)		(0.00)	(0.00)	
HH income (per capita)	0.71***	0.19***	0.19***	0.71***	0.18***	0.19***	0.71***	0.19***	0.19***
	(0.02)	(0.04)	(0.04)	(0.02)	(0.04)	(0.04)	(0.02)	(0.04)	(0.04)
Slope vars.	-	-	Visits	-	-	Visits	-	-	Visits
R^2	0.12	0.02	0.01	0.12	0.01	0.00	0.12	0.02	0.01
Adj. R^2	0.12	−0.14	0.01	0.12	−0.14	0.00	0.12	−0.14	0.01
Num. obs.	18355	18355	18355	18355	18355	18355	18355	18355	18355
Num. groups: pid			2469			2469			2469
RMSE			1.03			1.03			1.03

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$