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Abstract

Scientific studies on the predictors of working after retirement have mostly neglected individuals' work histories. We present an integrative framework based on life course theory to investigate the extent to which characteristics of work histories explain the decision to work after retirement. The data are retrieved from the Survey of Health, Ageing and Retirement in Europe (SHARE), combining information on life histories with information on current retirement. The results of our logistic models show that the larger the share of part-time work or self-employment over the work career, the higher the likelihood to work after retirement. Also, those with high occupational status and flexible careers are particularly likely to work after retirement. Regarding gender, we found that divorced women are particularly likely to work after retirement, but only if they did not remarry. We conclude that inequalities that develop across the life course continue to play a role after retirement.

Key words: bridge employment, retiree workers, employment histories, cumulative (dis)advantage

Introduction

The traditional view of retirement as an abrupt and one-time exit from the labor market no longer holds true today. Instead, a growing number of older adults work in paid jobs after retirement (Beehr & Bennett, 2015, Maestas, 2010). Following the rise in working retirees, scientists have begun to ask questions regarding the determinants of working after retirement. Previous research has largely focused on proximal factors to the retirement transition. In this study we examine instead the role of earlier work experiences as possible determinants of the decision to work after retirement. Working after retirement is defined as working for pay while also receiving pension income (Dingemans, Henkens & Van Solinge, 2017, Parry & Wilson, 2014).

Life course sociology points to the importance of earlier life experiences for explaining transitions later in life, thereby placing decision-making processes in a social and historical perspective (Settersten, 2003). Although research on working after retirement is often approached theoretically from a life course perspective (Wang, et al., 2008), an empirical examination of the role of previous work history characteristics is largely missing. The focus in previous research has been on basic socio-demographic characteristics such as gender and educational background and on factors that were proximal to the retirement transition, such as health, partner status, wealth, and income (Cahill, Giandrea & Quinn, 2006). Only a very few studies have examined life course determinants of late career employment, however, not with a specific focus on working after retirement (Ponomarenko, 2016, Singh & Verma, 2003, Wahrendorf, et al., 2017). This is remarkable given that research on employment opportunities prior to retirement and on the transition into retirement has demonstrated that distal factors related to employment history are in fact crucial to decisions in late careers (Bennett & Möhring, 2015, Damman, Henkens & Kalmijn, 2011). From a societal point of view too, it is important to improve our understanding of the relationship

between work histories and later-life work decisions in light of rising inequalities in old age and in working careers. In particular, it is important to better understand how processes of cumulative advantage and disadvantage over the individual life course affect late-life work decisions (Crystal, Shea, & Reyes, 2016).

The current study therefore addresses the following research question: How is working after retirement related to the previous employment history with respect to the number of years in different types of employment, the number of job changes, and occupational status over the work career? Our theoretical perspective takes a multidisciplinary approach based on life course theory and integrates economic and psychosocial mechanisms that can reveal how work histories relate to working after retirement. While economic theory focuses on financial resources that determine the affordability of retirement, psychosocial research stresses the importance of labor market integration and organizational attachment as drivers of older workers' decisions to work after retirement.

In addition to the existing body of research on the proximal determinants of working after retirement, the majority of which is conducted in the United States (e.g., Cahill et al., 2006) and Canada (e.g., Armstrong-Stassen, Schlosser & Zinni, 2012), we focus on working after retirement in Europe. The data for this study are derived from the 'Survey of Health, Ageing and Retirement in Europe' project (SHARE) (Börsch-Supan et al. 2013). SHARE provides us with accurate data on current circumstances on the one hand and reliable measures of past life courses on the other. Together, these data provide information on recent work and retirement decisions as well as past work events for 18,696 individuals.

Theoretical framework

The decision-making process regarding working after retirement does not occur in isolation. Life course theory stresses the importance of previous labor market experiences in shaping the

opportunity structure for working after retirement (Crystal et al, 2016), in addition to the importance of proximal circumstances such as socioeconomic status and health. Previous labor market experiences vary to a great extent, for instance, with regard to the number of years spent in employment, experience of discontinuity in career paths, and achieved occupational status (Möhring, 2015, Wahrendorf et al., 2017). Despite the clear indication in life course theory that previous labor market experiences have consequences in terms of opportunities and motivation to work after retirement, the theoretical framework does not lead to concrete hypotheses on the direction of the relationship.

Previous research incorporates two broad categories of determinants, which provide divergent underlying mechanisms for the impact of employment histories. First, the decision to work after retirement has been linked to the accumulation of resources over the work career (Maestas, 2010, Singh & Verma, 2003). In particular, the ability to accumulate financial resources and pension entitlements may have profound implications for preparedness for retirement and with it the potential need to work after retirement in order to supplement the pool of resources (Kantarci, 2012). A second category of determinants is derived from psychosocial discourse. Following continuity theory (Atchley, 1999), it is argued that older adults prefer to engage in the same activities after retirement as they did prior to it (Gobeski & Beehr, 2009). Previous research has shown that older workers who have been in continuous career paths are more likely to be attached to their organization (Singh & Verma, 2003, Armstrong-Stassen et al, 2012).

While financial arguments point to a necessity to work beyond retirement, the psychosocial argument stresses individuals' internal motivation to continue working. These arguments may lead to conflicting expectations on how specific labor market experiences influence the decision to work after retirement. On the one hand, for individuals who have been in disadvantaged and insecure positions during their work career, their disadvantage may

translate into a need to work after retirement in order to make ends meet. Their counterparts with more secure careers are more likely to have accumulated sufficient financial pension resources and may not need to work after retirement at all. Furthermore, those with stable attachment to one employer, for example in the public sector, might be likely to follow standardized retirement pathways that do not provide possibilities to continue working after legal retirement age (Riekhoff, 2018). On the other hand, in light of the psychosocial argument, those with continuous employment over the career would be particularly likely to continue working after retirement because of their attachment to working life.

Hypothesis development

First, we expect that a certain level of labor market attachment is a precondition for paid work after retirement. Individuals who have participated in the labor market for relatively few years may be faced with a financial necessity to work in retirement, but the opportunities to do so may be limited. By contrast, individuals with a strong attachment to the labor market have a strong work identity (Wahrendorf et al, 2017), and are furthermore likely to have better opportunity structures for employment. Employers tend to prefer employees with demonstrable track records in the labor market and accumulated experiences that are specifically valuable to the organization (Oude Mulders, 2016). We hypothesize that *the more years an individual has been integrated in the labor market, the greater the likelihood of their working after retirement* (Hypothesis 1).

However, it may depend upon the type of employment to what extent labor market integration leads to a greater likelihood of working after retirement. Even if individuals have been integrated in the labor market for many years over their life courses, the accumulation of financial resources and pension entitlements may have been insufficient to make ends meet in retirement. For instance, limited or incomplete pension contributions could be the result of a

substantial number of years working part-time or in self-employment. At the same time, previous research has suggested that continuing working after retirement among the self-employed is a matter of maintaining consistency in life patterns over time (Von Bonsdorff, et al., 2017). Therefore, we expect that *the larger the number of years in part-time employment and in self-employment, the higher the likelihood of working after retirement* (Hypothesis 2).

Another factor that may impact on the decision to work after retirement is the (dis)continuity in work careers. Also discontinuity and insecurity in work careers may hinder the full accumulation of pension entitlements. For instance, a large number of job changes over a work career, may lead to scattered and incomplete pension contributions resulting in pension shortfalls later in life. This may push individuals into paid work after retirement. We hypothesize that *the larger the discontinuity in career paths, the higher the likelihood of working after retirement* (Hypothesis 3)

Finally, we expect that retirees who have been working in low occupational status jobs may be left with a financial necessity to participate in paid work after retirement (Maestas, 2010). Jobs with a low occupational status are particularly likely to lack generous pension facilities, and wages may have been too low to save for retirement on an individual basis. At the same time, the psychosocial argument as described above is particularly likely to apply to retirees who participated in high occupational status jobs over their work careers and who are likely to be free from financial constraints in retirement. Previous research by Zhan, Wang, and Yao (2013) has shown that the effect of work commitment on working after retirement only exists for retirees without economic stress. The authors state that: “the associations between work-related commitment and bridge employment decisions (...) became weaker and not significant for retirees facing high economic stress” (Zhan et al, 2013, p. 370). For retirees with higher occupational status the decision to work after retirement may thus be driven by psychosocial mechanisms, while financial arguments are more important for low occupational

status retirees (Dingemans & Henkens, 2014). Consequently, we expect that *both retirees with low and high average occupational status over the work career will be likely to work after retirement* (Hypothesis 4).

Work careers are highly gendered due mostly women overtaking unpaid care work in the family as well as gender labor market segmentation with more women working in service sector and public employment (Möhring, 2015, König, 2017, Riekhoff, 2018). Therefore, we expect to see gender differences in the relationship between employment careers and working after retirement and investigate our hypotheses for men and women separately.

Data and method

Data

In this study, we use data from the ‘Survey of Health, Ageing and Retirement in Europe’ (SHARE). Since 2004, the SHARE project has collected data from adults aged 50 years and older in several European countries (Borsch-Supan et al., 2013). To investigate our research question, we made use of the first five waves. Wave 1, 2, 4, and 5 are the regular panel waves in which respondents are questioned about their current life circumstances. These data were collected in 2004, 2006, 2011, and 2013 respectively. The third wave, collected in 2008, has a different format and complements the data by adding detailed information on the life histories of respondents. This part of the SHARE project is referred to as SHARELIFE in which retrospective information is collected using a Life History Calendar (LHC) approach (Schröder, 2011). This approach helps respondents to remember the occurrence and timing of past events. From these data, we were able to construct the work trajectories of the respondents over their careers. Together, the five waves of SHARE provide a rich source of information on older adults’ current and past experiences.

The countries included in our study were restricted to those that participated in the data collection of SHARELIFE, namely: Austria, Belgium, Czech Republic, Denmark, France, Germany, Greece, Italy, the Netherlands, Poland, Switzerland, Spain, and Sweden. The analytical sample consists of respondents in these countries aged between 60 and 75 who were retired. Retirement is defined as being in receipt of a pension income, which could be a public or occupational pension, or a combination. The age range of 60-75 was selected to avoid the impact of extreme cases of very young retirees or very old workers on the results. The data of the selected retirees were then merged with their information from the SHARELIFE questionnaire. The final sample size was 18,696. The mean age of the people in sample was 67.7, and 46.0 percent were women.

Measures

The dependent variable, working after retirement, was measured in the panel wave by looking at forms of income received by retirees. Those only receiving a pension income were classified as full retirees (0). Retirees receiving income from paid work in addition to their pension income were classified as working retirees (1). The main independent variables were constructed based on the SHARELIFE data and comprise information on work histories from age 20 to 59. First, we included a variable of the total number of years in employment including all types of employment. Second, we calculated separate measures for different types of employment: (1) years in regular employment (full-time); (2) years in part-time employment; (3) years in self-employment. Third, we included a variable for the number of job changes experienced, reflecting career discontinuity. Finally, occupational status was operationalized on the basis of the International Socio-Economic Index of Occupational Status (Ganzeboom & Treiman, 1996). We took the mean average of the two-digit ISEI codes

Table 1: Means, standard deviations, coding of variables, and related survey questions.

	Mean (SD)	Coding properties	Wording of the question
<i>Variables from the life course wave (retrieved from SHARELIFE, wave 3) referring to age 20 to 59:</i>			
Years in employment	33.66 (7.97)	Continuous variable, ranging from 0 to 40	The following questions were used for the construction of the four work history variables: a) Have you ever done any paid work, which lasted for a period of 6 months or more?
Years in regular employment	25.13 (14.74)	Continuous variable, ranging from 0 to 40	b) Has your situation ever changed [since ...]? c) In which year did your situation change? d) Please look at SHOWCARD14. Which of these best describes the situation you changed to?
Years in self-employment	3.93 (10.12)	Continuous variable, ranging from 0 to 40	e) In this job as [{job title}], did you work full-time or part-time or a combination of both?
Years in part-time employment	2.56 (7.27)	Continuous variable, ranging from 0 to 40	f) In which year did you start your [first/next] paid job (as employee or self-employed), which lasted for 6 months or more?
Number of jobs	2.85 (2.10)	Continuous variable, ranging from 0 to 20	g) Please look at SHOWCARD 15. What best describes your job as [{job title}]?
Occupational status	36.99 (16.53)	Continuous variable, mean ISEI score, ranging from 0 to 70	
<i>Variables from the panel waves (retrieved from SHARE, waves 1, 2, 4, and 5):</i>			
Working after retirement	91% 9%	Dummy variable: 0 = Full retirement 1 = Working after retirement	a) Have you received income from any of these [pension income] sources in the year? b) The following questions are about your current main job (various questions were asked and used here to check current work status)
Log. pension income of the household	7.66 (1.63)	Continuous variable, ranging from 1.39 to 11.54	Have you received income from any of these sources in the year? After taxes, about how large was a typical payment of [public / occupational / survivor pension]
Age	67.77 (4.26)	Continuous variable, ranging from 60 to 75	Information available prior to the interview.
Health status	36% 64%	Dummy variable: 0 = Fair, Poor 1 = Excellent, Very good, Good	Would you say your health is...? (In wave 1, half of the respondents got other answer categories. For them (very) good health is coded 1 and fair or (very) bad health is coded 0)
Educational status	32% 48% 19%	Categorical variable: 1 = Low 2 = Medium 3 = High	What is the highest school leaving certificate or school degree that you have obtained? Which degrees of higher education or vocational training do you have?
Marital status	68% 6% 5% 7%	Categorical variable: 1 = being married (ref, includes marriages and registered partnerships) 2 = re-married after divorce 3 = never married 4 = divorced	What is your marital status? Answer categories were: 1. Married and living together with spouse; 2. Registered partnership; 3. Married, living separately from spouse; 4. Never married; 5. Divorced; 6. Widowed <i>Additionally retrieved from SHARELIFE:</i> Information on previous partnerships:

	15%	5 = widowed	Did you get divorced from [{name of partner}]?
Child(ren)	9%	Dummy variable: 0 = Has no children	How many children do you have that are still alive? Please count all natural children, fostered, adopted, and stepchildren.
	91%	1 = Has child(ren)	

Source: SHARE, www.share-project.org.

for each job over the course of the career. The range of this continuous variable is 0 to 70 with higher levels indicating higher status.

We controlled for factors that are known to impact the decision to work after retirement: the level of pension income of the household, age, educational level, health status, marital status, and whether the respondent has children (Dingemans et al., 2017, Singh & Verma, 2003). Table 1 provides a full description of the operationalization of all variables including the wording of the survey questions and presents mean values and standard deviations.

Analytical strategy

To analyze the determinants of the probability of working after retirement, we used logistic models and computed odds ratios. To arrive at a sufficient number of working retirees in the final sample, we cumulated the different SHARE waves. We therefore compute random effects nested models to control for repeated measures within observations. Because our focus is on relationships on the individual level alone, we controlled for country-level heterogeneity by means of country fixed effects (Allison, 2009). The logistic models were analyzed by means of Stata version 15.0. Furthermore, we calculated and plotted adjusted predictions for the probability of working after retirement at representative values of selected employment history indicators (Williams, 2012).

Results

The descriptive information on the sample is presented in Table 1. Overall, about 9 percent of retirees worked after retirement, which is consistent with statistics from Eurostat (2018) on employment rates of older adults. Table 2 presents the odds ratios from the logistic models for the probability of working after retirement for men and women. Models 1 included only the

Table 2: Multilevel logistic regression of working after retirement on work history and control variables for individuals age 60-75 years, odds ratios.

	Men		Women	
	Model 1	Model 2	Model 1	Model 2
<i>Work history</i>				
Years employed	1.078*** (3.55)		1.050*** (4.70)	
Years regular employment		1.024 (1.37)		1.027* (2.52)
Years self-employment		1.116*** (6.02)		1.085*** (5.96)
Years part-time employment		1.136*** (4.37)		1.050*** (3.76)
Number of jobs		1.185*** (4.56)		1.142** (3.16)
Mean occupational status		1.025*** (3.72)		1.008 (1.08)
<i>Controls</i>				
Log. pension income of the household	1.019 (0.51)	1.018 (0.50)	1.031 (0.67)	1.033 (0.72)
Age	0.796*** (-11.13)	0.792*** (-12.03)	0.747*** (-11.03)	0.747*** (-11.24)
Subjective-rated health: good	2.623*** (5.58)	2.676*** (5.96)	2.092*** (3.98)	2.053*** (3.92)
Educational status (RC: medium)	ref.	ref.	ref.	ref.
low	0.381*** (-3.80)	0.374*** (-4.09)	0.696 (-1.46)	0.684 (-1.46)
high	3.347*** (5.95)	2.337*** (4.05)	2.039** (3.09)	2.189** (3.13)
Marital status (RC: married)	ref.	ref.	ref.	ref.
re-married (after divorce)	1.373 (1.11)	1.321 (1.01)	0.787 (-0.64)	0.795 (-0.61)
never married	1.565 (0.95)	1.393 (0.73)	2.106 (1.54)	2.378 (1.79)
divorced	1.832 (1.79)	1.738 (1.72)	3.375*** (4.29)	3.343*** (4.24)
widowed	1.344 (0.85)	1.426 (1.07)	1.669* (2.15)	1.732* (2.34)
Children (RC: no children)	1.289 (0.73)	1.224 (0.61)	2.497* (2.44)	2.235* (2.17)
Constant	147.6*** (3.51)	335.8*** (4.30)	12181.8*** (5.99)	11759.9*** (6.00)
Variance(Constant)	12.798*** (2.638)	9.726*** (1.577)	10.649*** (2.161)	10.059*** (1.988)
N observations	9994	9994	9289	9289
N respondents	5812	5812	5557	5557
Wald chi sq.	236.501	284.299	184.764	192.686
Log likelihood	-2652.357	-2555.512	-1955.775	-1937.347

Standard error in parentheses; ***p < 0.001, **p < 0.01, *p < 0.05; additional control variables: N-1 country dummies. Source: own calculations using SHARE waves 1-5, including SHARELIFE.

indicator for years employed over the life course along with the control variables; Models 2 differentiate types of employment. The first hypothesis (H1) concerned the overall effect of labor market integration and predicted that for both genders the likelihood of working after retirement would increase with the number of years employed. From Models 1 we conclude that the total number of years employed is indeed positively related to working after retirement for both genders. With each year in employment the odds of working after retirement increased by 1.05 for women and by 1.08 for men.

Hypotheses 2 to 4 were tested in Models 2 that included separate indicators for different types of employment along with measures for occupational status and number of jobs and occupational status over the career. Years in regular employment was not significantly related to the likelihood of working after retirement for men. For women, the relationship was significant and positive indicating that with each year in regular employment the odds of working in retirement increased by 1.03.

Hypothesis 2 predicted that the working after retirement would be more likely, the longer someone worked in part-time employment or self-employment. For both genders we found that part-time work and self-employment were positively correlated to the probability of working after retirement. With each year increase of self-employment, the odds of working after retirement increased by 1.09 for women and by 1.12 for men. Compared to self-employment, part-time employment had a slightly stronger effect for men (odds increased by 1.14), and a slightly weaker effect for women (odds increased by 1.05).

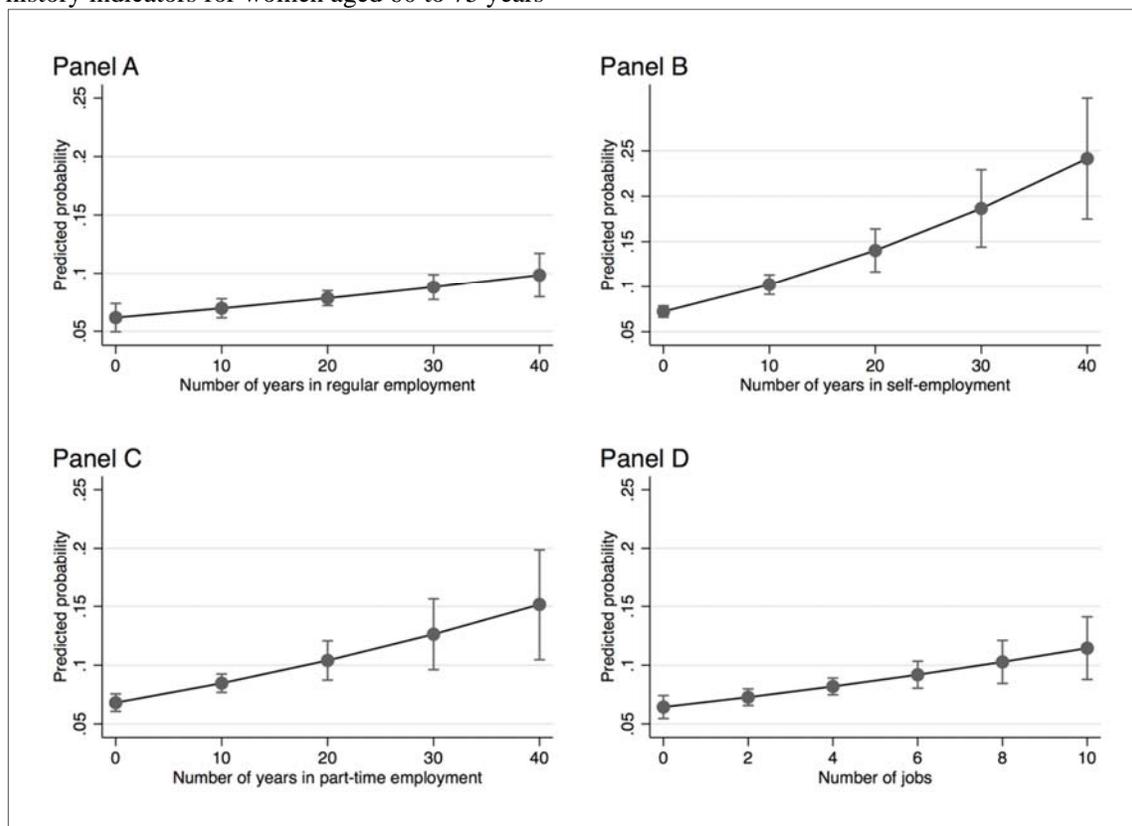
We assumed that discontinuity in career paths, as indicated by the number of job changes, goes along with an increased likelihood of working after retirement (Hypothesis 3). Indeed, the results in Models 2 show that each job change is related to a significant increase in the odds of working after retirement for both genders: for women the increase was 1.14 and for men 1.19.

The last hypothesis predicted that retirees with high and with low occupational status over the work career will be likely to work after retirement (Hypothesis 4). Models 2 provide only partial support for this assumption. First of all, the results for mean occupational status over the career differed by gender. Men with a high occupational status had a higher probability of working after retirement than their counterparts with medium or low status, while occupational status did not play a role in women's probability of working after retirement. For men the odds of working after retirement increased by 1.03 for each point increase in occupational status (scale 0-70). The quadratic term of occupational status was not significant for either gender (calculations not shown). Accordingly, we did not find the relationship between occupational status and working beyond retirement to be curvilinear.

The logistic models in Table 2 also show the results for the control variables. Based on the life history information from SHARELIFE, it was possible to derive a detailed picture of the relationship between marital status and working after retirement. Clear gender differences emerged. While for women the marital status clearly played a role for the likelihood to work after retirement, no significant relationships were found for men. Among divorced women, only those who stayed divorced had a significantly higher probability of working, while those re-married after divorce did not show a significant difference from continuously married individuals. Also, widowhood was associated with a higher likelihood of becoming a working retiree, while women never being married did not significantly vary from those continuously married. Having children was associated to an increased likelihood of working after retirement for women, but not for men. Further, the results show that the level of pension income in the household is not significantly related to working after retirement. Retirees who were younger, retirees with high educational status, and retirees in good health were more likely to work than older retirees, those with low educational status, and those suffering from health problems.

To further illustrate the relationship between employment history and the probability of working after retirement, we calculated adjusted predictions at representative values of selected employment history variables. The predicted probabilities are shown in Figure 1 for women and Figure 2 for men; only probabilities for significant coefficients were estimated. Panel A in Figure 1 for women shows the likelihood of working associated with different numbers of years in regular employment. For women with a low labor market attachment during mid-life (between 0 and 10 years), the probability of working after retirement amounts to 7.0 percent (see Figure 1, Panel A). For women who have been consistently employed (40 years), the figure rises to 10 percent (see Figure 1, Panel A). Differences are more pronounced

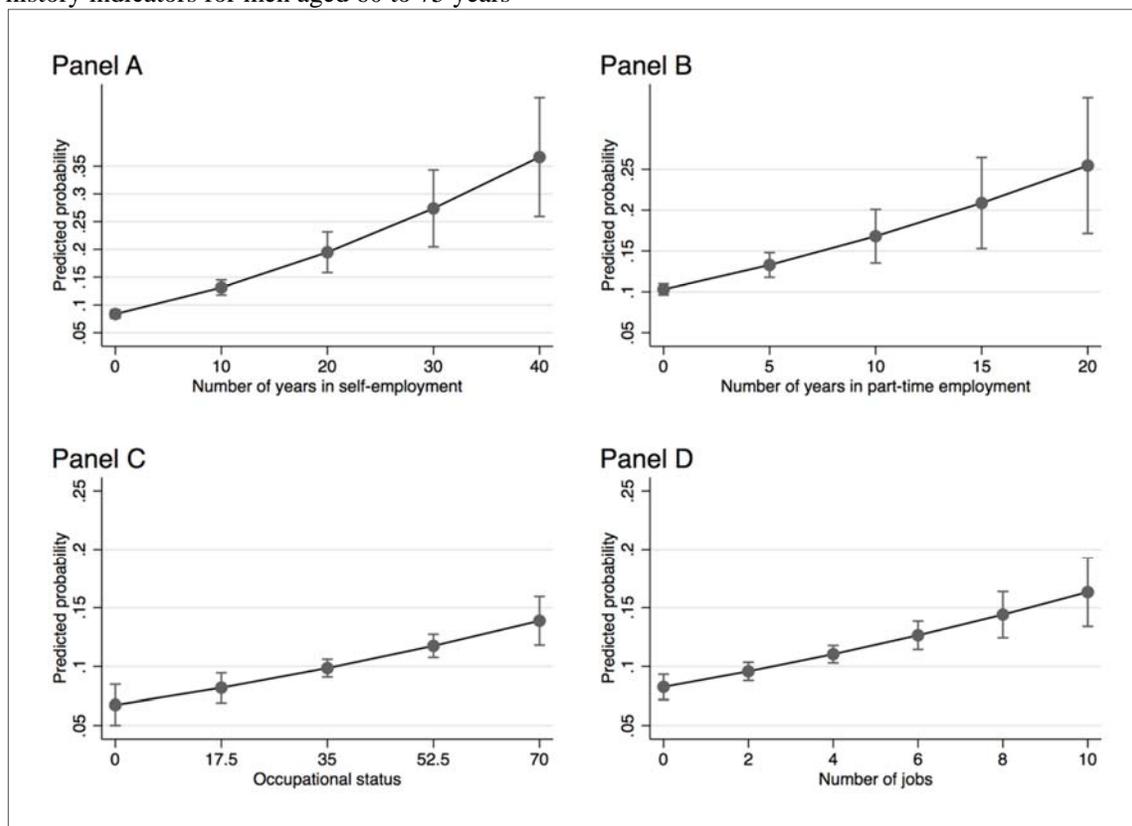
Figure 1: Predicted probability of working after retirement according to different values of working history indicators for women aged 60 to 75 years



Note: calculation based on multilevel logit models in Table 2.
Source: own calculations using SHARELIFE and SHARE waves 1-5.

with respect to years in self-employment and part-time work. Women who did neither work part-time nor were self-employed during their career, had a predicted probability of working after retirement of around 7 percent (see Figure 1, Panels B and C). The probability rose to 15.2 percent when the women continuously worked part-time (panel C) and even to 24.2 percent for continuous self-employment (panel B). Panel D of Figure 1 depicts the relationship between the number of jobs and the likelihood of working. Women who spent their whole careers in the same job had an average probability of working beyond retirement of 6.4 percent, while the probability was 11.5 percent for women who have had very flexible careers (number of jobs = 10).

Figure 2: Predicted probability of working after retirement according to different values of working history indicators for men aged 60 to 75 years



Note: calculation based on multilevel logit models in Table 2.
Source: own calculations using SHARELIFE and SHARE waves 1-5.

For men, the most pronounced differences were identified with respect to the number of years in self-employment. While men who never were self-employed have a predicted probability of working after retirement of 8.4 percent, those who spend all their career as self-employed had a probability of 36.6 percent of continuing to work (see Figure 2, Panel A). Working part-time also went along with an increased probability of working beyond retirement compared to those who always worked full-time (see Figure 2, Panel B). However, part-time employment is not common among men, implying that this prediction should be treated with caution. For occupational status, the differences among men were less pronounced: Figure 2 Panel C shows an increase from 6.7 percent for men with a low average occupational status over their career (10 scale points) to 13.9 percent for those with a high average occupational status (70 scale points). Similar to women, men who spent their whole careers in the same job had the lowest probability of working beyond retirement (8.2 percent; see Figure 2, Panel D). This figure increases to 16.3 percent for men who have had very flexible careers (number of jobs = 10).

Discussion

With rising numbers of working retirees across many Western societies, questions arise regarding the determinants of working after retirement. While previous research has mainly focused on predictors proximal to the retirement transition, we investigated the impact of distal factors related to working histories. In line with life course theory, our results show that the likelihood of working after retirement can only be understood fully by taking into account the way it is embedded in individuals' previous work history. Below we discuss the main findings of our study.

Our results show that a certain level of labor force integration over the life course is a prerequisite for working after retirement, which aligns with literature that employers are not

very willing to employ retiree workers without specific skills (Oude Mulders, 2016). While for women, integration in any type of employment seems to increase their likelihood to work after retirement, for male retirees particularly those who spent many years in self-employment are likely to do so. Part-time work is likewise linked to a higher chance of working in retirement, however, part-time work is very exceptional among the men in our sample and therefore may be interpreted as an indicator of precarious work. Also, flexible employment is positively linked to the likelihood of participating in paid work after retirement. Part-time work or temporary jobs may not guarantee that older adults have sufficient pension income, meaning that these older adults may be confronted with (unexpected) pension shortfalls upon retirement (Singh & Verma, 2003). The additional income from a paid job in retirement can supplement this lack of financial resources. Despite the fact that a paid job after retirement increases financial well-being, it may have negative consequences for the overall well-being of retirees. Previous research has shown that those who need to continue working in retirement for financial reasons experience a sharp drop in life satisfaction over the retirement transition (Dingemans & Henkens, 2014). For those in self-employment, it has been argued that it is not so much a financial choice but a matter of preference to continue working after retirement (Von Bonsdorff et al., 2017), which is most likely to be positive to both financial and overall well-being of retirees (Kautonen, Kibler & Minniti, 2017).

The average occupational level over the course of the career path was found to have a positive relationship with working after retirement for male retirees. In line with previous literature, the results indicate that retirees with high occupational status continue to be strongly attached to the labor market (Armstrong-Stassen et al, 2012, Wahrendorf et al, 2017). In addition, retirees with high occupational career paths may also have better opportunities for finding a job after retirement. Our results also show that retirees with low occupational career trajectories are not more or less likely to work after retirement than their counterparts with

middle occupational level careers. We expected that retirees with low occupational career paths would have less generous pension plans from their jobs and would be more likely to earn wages that were too low to allow them to save for retirement on an individual basis. However, the results do not support this. Apparently, it is not the occupational level per se but rather insecurity and discontinuity in career paths that have negative consequences for financial well-being in retirement. However, for women, there was no impact at all of average occupational status on the likelihood of working after retirement.

What appeared to be an important driver for women was their marital status. Women without a partner, either never having been married, being divorced, or being widowed, were particularly likely to work after retirement. Previous authors have argued that divorced women are especially economically vulnerable in old age (Pleau, 2010). Our results, following a life course approach, suggest that this vulnerability is only present when women do not remarry after their divorce. Remarried women do not have a significantly different likelihood of working in retirement than their counterparts who remained married. In line with life course theory, it is important to consider both family history and work history in order to arrive at a better understanding of why older adults work after retirement. Especially for women, family histories may be highly intertwined with work histories, and this deserves more attention in future research on extending work careers and working after retirement (Möhring, 2017).

Theoretically, the relationships between work history experiences and working after retirement found in the current study point to processes of cumulative advantage and disadvantage (Crystal et al, 2016) that continue to play a role after retirement. Particularly insecurity and discontinuity in the career path seems to be translated to a lack of freedom regarding what to do in retirement (Casey & Berger, 2015). These retirees are likely to be pushed into paid work to make ends meet. By contrast, retirees who have been advantaged

over the work career in terms of their high occupational status are likely to have good opportunity structures to continue working after retirement, because employers would like to retain access to their wide range of experience. At the same time, they may prefer to maintain life patterns that are important to their identity after their retirement, including working life (Gobeski & Beehr, 2009, Dingemans & Henkens, 2014), as has also been suggested for those with a career in self-employment (Von Bonsdorff et al., 2017). We conclude that the inequalities that develop across the course of work careers seem to continue after retirement, which may also have serious policy implications. Policy reforms that aim to prolong working lives may be beneficial for those who have been advantaged over the course of their work careers, as they will get more opportunities to extend their working lives until higher ages. However, it may be detrimental for older adults with precarious work careers, who may feel pressure to extend their precarious work situations even across the borders of retirement. Most likely they end up in low quality and insecure jobs after retirement with little flexibility and autonomy (Lain, 2012). Previous research shows that the relationship of health and later life employment is complex and the flexibility of working arrangements is crucial (McDonough, et al., 2017).

Our study has several strengths, including the availability of detailed life histories for a large sample of retirees in Europe, which we could link to their work behavior in retirement. However, our results should be interpreted with the following limitations in mind. Although the SHARE data are a very rich source of information on the employment behavior of older adults, we have no information on what motivates retirees to work after retirement. Therefore, our study cannot provide information on subjective reasoning leading to the decision to work. Furthermore, the life course histories may be biased due to the fact it is a retrospective assessment. Respondents between the ages of 60 and 75 were asked to recall information from the period when they were 20 to 59, which they may not have recalled accurately. However,

the approach of using calendar interviews in SHARELIFE is likely to have limited this bias (Schröder, 2011).

Another limitation is that retirees from a variety of European countries have been pooled in the current study. We control for heterogeneity on the country level by means of country fixed effects in our logit models. However, it may be worthwhile to examine how differences across country contexts (Dingemans et al., 2017), for example due to pension system design, impact the relationship between work history and work after retirement. Future research should investigate these micro-macro linkages to better understand cross-national differences.

In spite of these limitations, our research clearly shows that work histories in addition to initial educational status and current factors such as health status and pension income are relevant to understanding the likelihood of working after retirement and they therefore should not be neglected in further research. Especially insecurity and discontinuity in work careers predict participation in a paid job after retirement. With the increase in flexible careers in many Western countries, it is important for both scientific researchers and policy makers to understand how these flexible careers may lead to transitions in and out of employment at the end of individual work careers.

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