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### Working after retirement

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# CHAPTER 2

## Working retirees in Europe: Individual and contextual determinants

Ellen Dingemans, Kène Henkens and Hanna van Solinge

*Submitted for publication*

*Abstract*

One of the solutions that could be used to resource the needs of an aging population is the encouragement of individuals to extend their working lives beyond retirement, often referred to as ‘bridge’ employment. Although previous studies provide important insights on the relationship between individual attributes and bridge employment, there is scant research on the extent to which differences across countries and between genders may exist and how these might be explained by economic and societal differences in the pension context. Therefore, we investigate the determinants of participation in bridge employment among male and female retirees in 16 European countries. Multilevel models are estimated based on data from the Survey of Health, Aging and Retirement in Europe project. We found that where there is high expenditure on pensions there is a lower likelihood of retirees, particularly women, participating in bridge jobs, while strong norms that support working past retirement are positively associated with bridge employment.

## 2.1 Introduction

Retirement arrangements emerged at the turn of the nineteenth to twentieth century and have been dynamic in their form and meaning ever since. Following a period in which many workers enjoyed the prospect of early retirement, the prospect of an aging population has put the topic of extending working life high on the policy agenda (Schalk et al., 2010; Van Dalen, Henkens, & Schippers, 2010). Many modern societies are confronted with unprecedented demographic changes, such as declines in fertility and mortality (Bongaarts, 2004), which will have severe consequences for the age structure of countries and the composition of the workforce. A relatively new group in the workforce consists of retirees who participate in paid work after retirement in so-called ‘bridge’ jobs (Feldman, 1994; Shultz, 2003). The participation of this group in paid labor is seen as one of the solutions to the consequences of an aging population (Bongaarts, 2004; Maestas & Zissimopoulos, 2010). The increasing popularity of bridge employment brings with it a need to identify its specific determinants. The power of contextual factors has become particularly relevant, given the changing pension landscape in modern societies. However, this topic has received only very limited attention so far (Beehr & Bennett, 2014). Therefore, to deepen knowledge in this area, we study this issue using a multilevel framework in which both individual-level and contextual-level determinants are considered.

In line with the increasing trend toward bridge employment, scientific research on its determinants is quickly progressing. In particular, economists and psychologists are focusing on the individual-level factors related to the decision to continue working after retirement. Their studies have revealed that highly educated workers, healthy workers, and men are especially likely to participate in paid jobs after retirement (Cahill, et al., 2006; S. Kim & Feldman, 2000; Wang, et al., 2008). In addition, they have shown that forms of occupational and organizational commitment pre-retirement are important in explaining (intentions for) participation in paid employment after retirement (Jones & McIntosh, 2010; Schmidt & Lee, 2008; Zhan, Wang, & Yao, 2013).

Although this literature has provided important insights on the phenomenon of bridge employment, several unanswered questions remain. First, most of the previous studies on the determinants of bridge employment are country-specific case studies. While these studies have been conducted mainly in the United States, the situation in European countries has recently started to receive some attention (e.g. Alcover, Topa, Parry, Fraccaroli, & Depolo, 2014; Dingemans, Henkens, & Van Solinge, 2015; Hochfellner, 2013). However, comparison of the results from these single-country studies is hampered because of the wide range of different bridge employment definitions that have been used across scientific disciplines and across countries.

Second, the issue of whether the variation in the contextual characteristics of countries plays a role in the bridge employment decision has rarely been addressed (Zhan & Wang, 2015). One exception is the cross-national study by Brunello and Langella (2012), which found that exogenous increases in the minimum retirement age differentially affect retirement and bridge employment transitions across various European countries. Unfortunately, this study focused exclusively on the work-to-retirement trajectories of men, and it is debatable whether explanatory models of bridge employment are the same for men and women (Beehr & Bennett, 2014). Therefore, in light of the foregoing, we focus on the two following research questions: (i) what determines bridge employment among male and female retirees in Europe? and (ii) to what extent are the characteristics of the pension context important in explaining variation across countries?

By answering these research questions, we aim to contribute to the existing literature on bridge employment in three ways. First, our study is among the first to adopt a cross-national perspective on bridge employment. Without such a cross-national focus, it is hard to compare results from different single-country studies because their definitions, conceptualizations, and operationalizations of the bridge employment concept differ so widely. Thus, we aim to provide descriptive information about the variability in bridge employment across European countries and how it differs between men and women using harmonized data from 16 European countries. Second, we attempt to explain the variation in bridge employment across countries by employing a multilevel approach to explore simultaneously the individual- and contextual-level factors that may affect bridge employment. Two aspects of the country-specific context are deemed to be particularly important in this respect. In line with Radl (2013), we argue that the incentive structure of the pension system is an important determinant in explaining retirement processes. Therefore, we take the variation in the generosity of pension systems across countries into account to explain variation in bridge employment behavior. At the same time, not only economic factors, but also normative ideas about retirement may play a role (Liefbroer & Billari, 2010) in the decision to enter bridge employment. We expect that a supportive normative environment regarding the combination of working and receiving a public pension will be positively associated with participation in bridge employment. By incorporating these factors into the explanatory model, we aim to test the expectation put forward by Zhan and Wang (2015) that both economic and social aspects of the pension context are important determinants of bridge employment.

Third, at the individual-level, we investigate how socioeconomic characteristics as well as marital status and informal caregiving activities affect participation in bridge employment. Previous studies on retirement decision making have stressed

that such explanatory models differ by gender (Damman, 2014; Pleau, 2010), but this assumption has hardly been investigated in respect of bridge employment (Pleau, 2010). Therefore, we follow the approach of Beehr and Bennett (2014), who argue that “both main effects and interaction effects need to be examined to truly understand the impact that gender has on retirement” (p. 6). Specifically, we examine whether marital status and participation in informal caregiving are differentially related to the bridge employment of men and women (Pleau, 2010).

For the current study, we use data from the Survey of Health, Aging and Retirement in Europe (SHARE) project, which includes information on employment and retirement trajectories in 16 European countries. The definition of bridge employment proposed in the current study is slightly different from that regularly used in the United States (Gobeski & Beehr, 2009; Wang, et al., 2008), where bridge employment is often defined as participation in a paid job after exit from a full-time career job with at least 10 years of tenure (Feldman, 1994). This definition would be problematic in several European countries because part-time employment is relatively common in all stages of the work career, especially among women (Eurofound, 2011). Therefore, we define bridge employment as the participation in paid work by those who receive a pension income (Dingemans, et al., 2015; Parry & Bown Wilson, 2014).

## **2.2 Theoretical framework**

Following Beehr and Bennett (2014) and Zhan and Wang (2015), we assume that participation in bridge employment can be explained by both individual- and contextual-level factors. This assumption relies strongly on life course theory, which emphasizes that life transitions do not occur in isolation but are rather shaped by various influences from the social environment (Settersten, 2003). For instance, personal life histories, social circumstances in various life domains—such as family life and work—and broader institutional circumstances may form opportunities and constraints that guide individual behavior. In keeping with this theoretical framework, traditional socioeconomic characteristics (Cahill, et al., 2006) as well as circumstances in the family domain, such as marital status and informal caregiving activities (Pleau, 2010), are deemed to be important determinants of bridge employment. In addition to these individual-level determinants, our study also considers the specific economic and societal characteristics of a country’s pension system (Lindbeck, Nyber, & Weibull, 1999; Radl, 2013; Zhan & Wang, 2015). We elaborate on these factors below.

*Bridge employment in Europe: individual-level explanations*

Differences in access to valuable resources may enable or constrain participation in bridge jobs among various subgroups of older adults in different ways. For instance, from both the supply-side and demand-side perspective, it is assumed that educational attainment—as a proxy for the level of human capital—positively relates to participation in bridge employment. Highly educated individuals are most likely to be committed to the work role and be intrinsically motivated to continue working (Gesthuizen & Verbakel, 2014; Kalmijn & Kraaykamp, 2007). At the same time, they may be particularly attractive to employers offering bridge jobs because of their high levels of human capital (Komp, Van Tilburg, & Broese van Groenou, 2010; Oude Mulders, Van Dalen, Henkens, & Schippers, 2014).

Second, health is a prerequisite for participation in the labor force. For instance, those in good health may be particularly likely to work in bridge jobs compared to those who suffer from health problems (Wang, et al., 2008). Moreover, healthy older workers may be intrinsically motivated to remain active in old age, while at the same time having more opportunities than their unhealthy counterparts to find a suitable bridge job because they are not hindered by health-related limitations (Adams & Rau, 2004).

Third, another aspect that gains in importance in the retirement landscape is the receipt of an occupational pension (Haverland, 2007; Walker & Alber, 1993). While public benefits provided by the welfare state are often redistributive in nature (Haverland, 2007) at least to some extent (OECD, 2011), occupational pensions are based on individual work careers and often exclude part-time and low-paid workers (Walker & Alber, 1993). We may expect that those with both public and occupational pensions have less of a financial need to continue working than retirees who only receive public pension benefits. In light of the foregoing, we formulate the following three hypotheses:

*Hypothesis 1:* Highly educated individuals are more likely to work in bridge jobs compared to their less well educated counterparts.

*Hypothesis 2:* Healthy individuals are more likely to work in bridge jobs compared to their less healthy counterparts.

*Hypothesis 3:* Those who receive occupational pensions are more likely to retire fully instead of participating in bridge jobs compared to those who only receive public pensions.

The retirement transition has been shown to be deeply entwined with other factors in family life, which can have consequences for the decision-making process on bridge employment as well. Previous literature suggests that marital status and informal caregiving activities may be of specific importance in this respect (Komp, et al., 2010; Pleau, 2010). With regard to marital status, particular attention has been paid to those older adults who have been divorced during their life courses. These individuals are assumed to be economically vulnerable in retirement (Damman, 2014; Pleau, 2010). In addition, retirees who have never been married may opt to work past retirement for social reasons because they do not have a partner at home who could substitute the missing social interaction with colleagues (Damman, Henkens, & Kalmijn, 2013b).

With regard to the provision of informal care, including the care for grandchildren, it has been argued that the likelihood of participating in bridge jobs is lowered in the case of such activities. The assumption is that the provision of care might limit the time that can be devoted to paid work (Carr & Kail, 2012; R W Johnson & Lo Sasso, 2000; Komp, et al., 2010). Based on a resources perspective (Wang, 2007), another mechanism for this negative relationship is that the limited number of social contacts in the case of caregiving reduces the level of social capital that is available to facilitate reintegration into the labor force after retirement (Carr & Kail, 2012). We therefore propose the following additional hypotheses:

*Hypothesis 4:* Bridge employment is particularly likely among retirees who are divorced or who have never been married compared with married counterparts.

*Hypothesis 5:* Informal caregiving for other adults or for grandchildren limits the likelihood of participation in bridge employment.

Another well known indicator of bridge employment is gender, with men being more likely to work in bridge jobs than women (H. Kim & DeVaney, 2005; Maestas, 2010). We argue that the relationship between gender and bridge employment may be influenced by the social roles men and women play in society (Eagly, Wood, & Diekmann, 2000). Following the gendered model of labor division, it is argued that women are often dependent on economic protection from their husband both throughout their life course and in retirement (Pienta & Hayward, 2002; Pleau, 2010; Szinovacz & DeViney, 2000). This is found to have detrimental economic consequences for women in the case of marital disruption (Szinovacz & DeViney, 2000). As a result, we might expect divorced women to be particularly likely to work in bridge jobs compared to their male counterparts. Moreover, we also expect gender-specific variation in the extent to which caregiving activities compete with paid employment; however, the direction is



less clear. Following Raymo and Sweeney (2006), it can be expected that women, as primary caregivers, are specifically likely to experience work–family conflict and therefore withdraw from work. On the other hand, the ‘life course experience’ of women who balance work and family demands may have equipped them with skills to balance work and care activities successfully after retirement as well – a capability that is less likely to be widespread among men who, as primary breadwinners, are mainly focused on paid employment throughout the course of their lives.

### *Contextual explanations for bridge employment*

While it is often emphasized that differences in pension contexts across countries may have implications for the retirement trajectories that older adults take, the specific contextual factors that relate to bridge employment are still largely unknown (Schalk & Desmette, 2015; Zhan & Wang, 2015). However, it is recognized that both economic factors and social norms may have important consequences for decisions in the work and retirement domain (Lindbeck, et al., 1999; Zhan & Wang, 2015).

Following Radl (2013), we postulate that cross-national differences in pension contexts create different incentive structures to work post-retirement. An important contextual factor that may impose constraints on participation in paid work after retirement is the generosity of the pension system. Economic models predict that the more financial resources that are available, the less likely older adults are to work past retirement, simply because there is no financial necessity to do so (Feldman & Beehr, 2011). In a less generous pension context, bridge employment may be a common behavior in retirement as a means to supplement pension income. It may even become an additional pillar in the construction of a retirement income, besides the three traditional pillars of public, occupational, and private pensions (Bowman, 2014; Larsen & Pedersen, 2013).

At the same time, societal normative signs that promote the prolonged employment of older adults may also influence the likelihood of working after retirement. Liefbroer and Billari (2010) define a social norm as “an expectation about acceptable behavior that is shared by a group of people” (p. 290) and they argue that social norms are not something of the past but are still shaping individual behavior in today’s post-industrial and individualized societies. Life course theory suggests that the sequencing and timing of certain life events, such as the exit from work, are largely influenced by social norms (Liefbroer & Billari, 2010; Settersten & Hagestad, 1996). Moreover, norms may exist regarding the combination of certain statuses, such as worker and retiree. Even though in policy debates the combination of work and retirement may be promoted in order to deal with an aging population, in public discourse extending working life past the

statutory retirement age may not be necessarily supported because it may also be evaluated as anti-social behavior in the sense that it could hinder opportunities for career mobility among the younger generation (Van Dalen & Henkens, 2002). We would argue that bridge employment is more likely in contexts where there is normative support for paid work after public retirement age than in countries with limited support for this norm. We therefore expect to find the following:

*Hypothesis 6:* The generosity of the pension context is negatively associated with bridge employment behavior.

*Hypothesis 7:* The normative support for paid work past retirement age is positively associated with bridge employment behavior.

## **2.3 Data and methods**

### *Data*

Data for this study came from the Survey of Health, Aging and Retirement in Europe (SHARE) project. The analyses used data from the fourth wave of the SHARE project carried out in 2011, which provides information on 16 countries: Austria, Belgium, the Czech Republic, Denmark, Estonia, France, Germany, Hungary, Italy, the Netherlands, Poland, Portugal, Slovenia, Spain, Sweden and Switzerland (Borsch-Supan et al., 2013). The analytical sample for the current study was restricted to the birth cohorts of 1936 to 1951. At the time of measurement, these respondents were aged between 60 and 75. In most countries retirement pensions can be received as early as 60 and bridge employment often starts relatively shortly after a career exit (Kail & Warner, 2013; Maestas, 2010), so this age range seemed the most appropriate. In this study, retirement is understood as the receipt of a pension income. Respondents in the SHARE were asked to indicate whether they received a form of public and/or occupational pension income. Those who did not receive any form of pension income, i.e., those still in their main careers, were excluded from the analyses (18 percent). There were missing values for some of the relevant variables, so 2.46 percent of the remaining cases had to be excluded. The final sample size was 22,488. The sample size for each country ranged from  $n = 637$  for Portugal to  $n = 2,995$  for Estonia. The mean age in the analytical sample was 68, and women made up 54 percent of the respondents.

### *Dependent variable: bridge employment*

Following previous empirical research (Dingemans, et al., 2015; Parry & Bown Wilson, 2014), bridge employment is defined as participation in paid work while

receiving a pension income. Retirees without paid work were placed in the “full retirement” group (0). Those retirees who answered the questions regarding their current job were coded as “bridge employees” (1).

*Independent variables: the individual level*

To measure *educational attainment*, we used the ISCED classification (UNESCO, 2006) provided by the SHARE team. The classification is based on information from country-specific questions on the highest qualification that respondents have obtained. We grouped the seven-category ISCED variable into three basic levels. Primary educational levels were categorized as “low” (1); secondary educational levels were categorized as “middle” (2); and tertiary educational levels were categorized as “high” (3). *General health status* was measured in SHARE by asking: “Would you say your health is ....” The answer categories were: “excellent” (1), “very good” (2), “good” (3), “fair” (4), or “poor” (5). The answer categories were rescaled such that a high score indicated excellent health. In addition, respondents were asked to indicate whether they received an *occupational pension*. We constructed a dummy variable to indicate the receipt (1) or absence (0) of an occupational pension income.

For current *marital status*, a four-category variable was constructed: 1) married (including marriage with or without living together and registered partnership); 2) never married; 3) divorced; and 4) widowed. The *informal care tasks* that respondents undertook were measured by asking whether they provided help to others outside the household. If the question was answered positively, respondents were asked: “In the last 12 months, how often altogether have you given personal care or practical household help to this person?” The answer categories were “every day”, “every week”, “every month”, or “less often.” We constructed a dummy variable to indicate whether a respondent had daily care tasks (1) or not (0) because this would most likely limit the time they could devote to paid work.

Another indicator for regular care tasks was whether people had grandchildren to look after on a daily basis. First, respondents were asked: “How many children do you have who are still alive?” Then respondents were asked: “Talking about grandchildren, how many grandchildren do you have?” We constructed a variable to indicate whether respondents had “no children or grandchildren” (0), “children, but no grandchildren” (1), or “grandchildren” (2). Respondents with grandchildren were then asked: “During the last 12 months, have you regularly or occasionally looked after your grandchild(ren)?” The answer categories were “almost daily”, “almost every week”, “almost every month”, or “less often.” Similar to the operationalization of informal caregiving, we placed respondents who looked after their grandchildren almost every day into the category

“grandchildren, daily care tasks” (3). The descriptive statistics of the independent variables are presented in Table 2.1.

*Independent variables: the contextual level*

Information on the generosity of the pension context was obtained from Eurostat (data for the year 2011; see <http://ec.europa.eu/eurostat/>). The measure *expenditure on pensions* represents the spending on pensions as a percentage of a country's GDP. We adjusted this measure to account for the age structure in each country (Lynch, 2006). We divided expenditure on pensions by the old-age dependency ratio, which we retrieved from the World Bank (data for the year 2011; see <http://data.worldbank.org/indicator/SP.POP.DPND.OL>); this ratio represents the proportion of people older than 64 in the working population (aged 15 to 64). The higher the score for this newly computed variable, the more generous the pension climate for older citizens. In the analyses, we multiplied the scores by 10 to increase interpretability.

To determine the *normative support for bridge employment*, we used a measure from the special edition of the Eurobarometer (TNS Opinion & Social, 2012) in which it was asked to what extent people believed that “older adults should be able to continue working past the official retirement age.” The answer categories were: “they should be able to continue”, “they should have to stop working” or “don't know.” We used the percentage that answered that older adults “should be able to continue” to measure support for working past retirement. In the analyses, we also multiplied this variable by 10, which means that the estimated coefficient corresponds to an increase of 10 per cent in normative support for working past retirement. Unfortunately, data for Switzerland were not available, which limited the analyses on this issue to 15 countries.

*Analytical strategy*

To deal with the dependency of observations in our hierarchically structured dataset, a multilevel modeling approach was required (Bryan & Jenkins, 2013). Specifically, we estimated multilevel logit models in order to account for the binary nature of our dependent variable (Guo & Zhao, 2000). A sufficiently large sample size at the country level is needed to limit estimation bias in multilevel models. Even though there is a lack of consensus about the required size of the sample (Bryan & Jenkins, 2013), it is clear that our sample of 16 countries is relatively small from a multilevel modeling perspective. Nevertheless, it still enabled us to investigate the effect of a limited number of country-level characteristics on bridge employment (Engelhardt, 2012; Hank & Erlinghagen, 2011; Komp, et al., 2010).

Table 2.1. *Descriptive statistics of the individual-level indicators.*

	Mean	SE
Age		
60–63	0.22	0.42
64–67	0.28	0.45
68–71	0.27	0.44
72–75	0.23	0.42
Educational attainment		
Low	0.20	0.40
Middle	0.60	0.49
High	0.20	0.40
Health (range: 1–5)	2.70	1.05
Female	0.53	0.50
Receipt of occupational pension	0.14	0.35
Marital status		
Married	0.73	0.44
Never married	0.05	0.21
Divorced	0.09	0.28
Widowed	0.13	0.33
Daily informal care tasks	0.07	0.24
(Grand)Children		
No children	0.08	0.28
Children, no grandchildren	0.14	0.35
Grandchildren, no daily care	0.69	0.46
Grandchildren, daily care	0.09	0.28

Source: SHARE, wave 4, 2011.

## 2.4 Results

### *Descriptive results*

On average, 11 per cent of older adults between the age of 60 and 75 participated in bridge employment with considerable variation across the investigated countries. For example, while working after retirement was quite exceptional in countries such as Spain (3 per cent), Slovenia (3 per cent), Poland (5 per cent), and France (5 per cent), it was relatively common among retirees in Estonia (22 per cent), Sweden (21 per cent), Switzerland (20 per cent), and Denmark (14 per cent). Figure 2.1 shows that the degree of gender inequality in participation in bridge employment also varies by country. Even though the overall conclusion was that men were more likely to participate in bridge jobs compared to women, gender differences seemed to be very small in countries such as Austria, Spain and Estonia. Relatively large differences were found in Denmark, the Netherlands and Sweden.

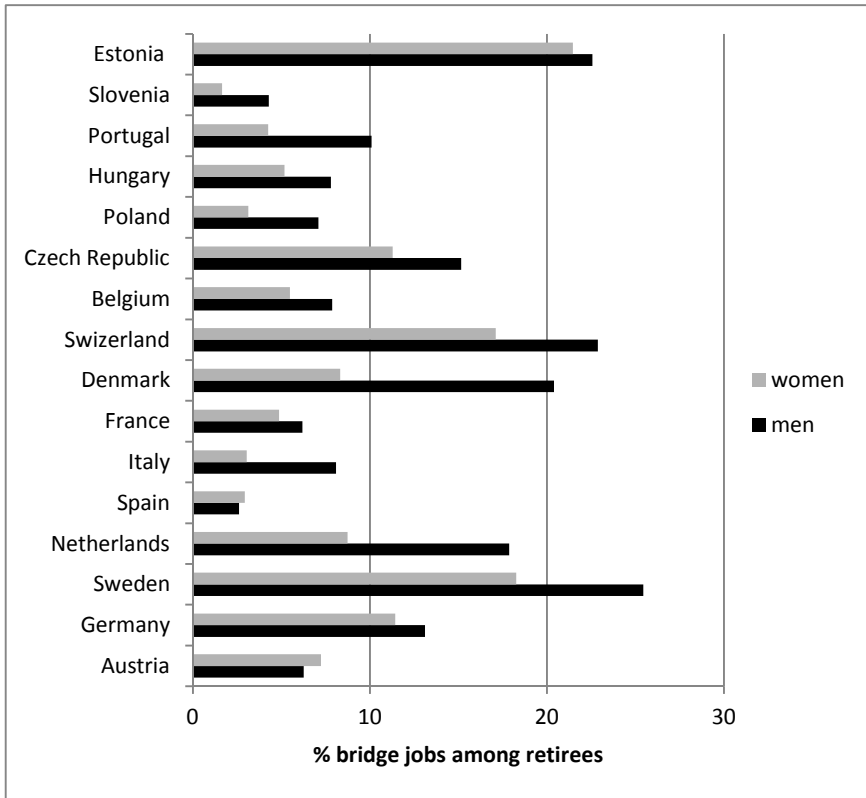


Figure 2.1. *Bridge employment across 16 European countries by gender (SHARE, 2011).*

With regard to the characteristics of the pension context, i.e., expenditure on pensions and support for the norm that older adults should be able to work after public retirement age, Figure 2.2 shows that there was considerable variation across countries. For instance, expenditure on pensions was relatively high in Austria and Poland, while relatively low levels of expenditure were found in Estonia, Sweden and Germany. At the same time, Denmark and the Netherlands were found to have relatively high levels of normative support for combining work and retirement, while the support was rather low in Slovenia and Italy. For example, only 29 percent of the Italian respondents agreed with the statement that older adults should be able to continue working after retirement as compared to 93 percent in Denmark. Overall, we may conclude that the association between expenditure on pensions and normative support for working after retirement is rather weak.

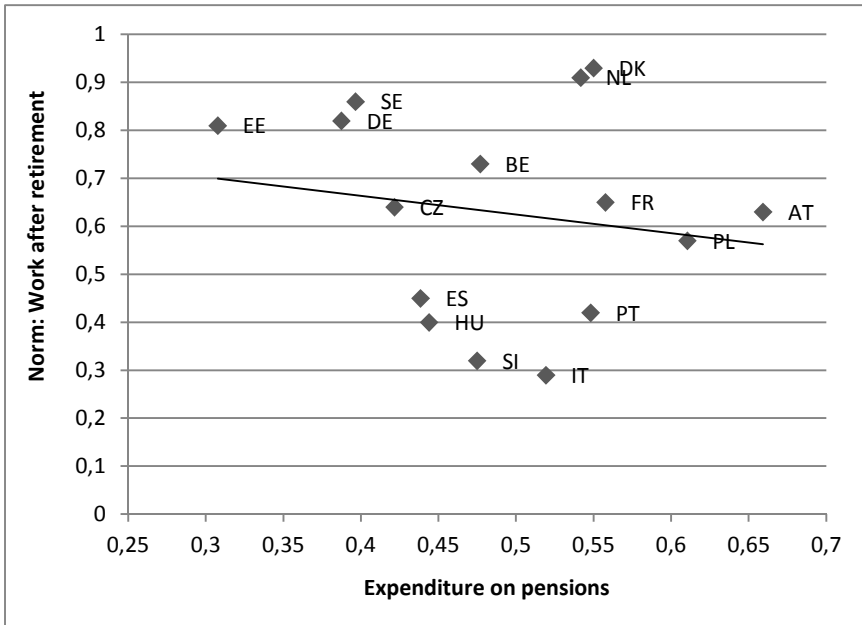


Figure 2.2. *Expenditure on pensions and the normative support for working after retirement for 16 European countries (SHARE, 2011).* Note: for country ID's, check appendix A1.

### *Multivariate analyses*

Tables 2.2 and 2.3 present the estimates from the multilevel logit models explaining participation in bridge employment versus full retirement based on individual- and contextual-level factors, separately by gender (estimates from the pooled model are provided in section Appendix A2). Table 2.2 presents the estimated models for male retirees. First, model 1 showed that high instead of low educational attainment ( $OR = 2.89$ ) and better health ( $OR = 1.49$ ) were related to a higher likelihood of working in bridge jobs rather than fully retiring, which supports Hypotheses 1 and 2. Support was also found for Hypothesis 3, namely that the receipt of an occupational pension was related to a lower likelihood of participating in bridge jobs compared to retiring fully ( $OR = 0.74$ ). In addition, the results in model 1 showed that bridge employment was less likely with increasing age. In model 2, we included the variables for marital status, informal care for others and care for grandchildren. Here, the only significant predictor was the provision of daily care tasks by male retirees, which was related to a lower likelihood of working in bridge jobs ( $OR = 0.76$ ; Hypothesis 5).

Table 2.2. Multilevel logit model to predict bridge employment among male retirees.

	Model 1		Model 2		Model 3		Model 4 <sup>a</sup>		Model 5 <sup>a</sup>	
	Logit	SE	Logit	SE	Logit	SE	Logit	SE	Logit	SE
<i>Individual level</i>										
Age										
60–63 (ref)										
64–67	-0.36**	0.08	-0.37**	0.09	-0.37**	0.09	-0.40**	0.09	-0.40**	0.09
68–71	-0.57*	0.09	-0.59**	0.09	-0.59**	0.09	-0.59*	0.09	-0.60*	0.09
72–75	-1.11**	0.10	-1.13**	0.10	-1.13**	0.10	-1.14**	0.11	-1.14**	0.11
Educational attainment										
Low (ref)										
Middle	0.42**	0.12	0.40**	0.12	0.40**	0.12	0.42**	0.12	0.41**	0.12
High	1.06**	0.12	1.04**	0.13	1.04**	0.13	1.06**	0.13	1.05**	0.13
Health status	0.40**	0.03	0.40**	0.03	0.40**	0.03	0.41**	0.03	0.41**	0.03
Receipt of occupational pension	-0.29**	0.10	-0.30**	0.10	-0.29**	0.10	-0.30*	0.12	-0.29*	0.12
Marital status										
Married (ref)										
Never married			-0.29	0.19	-0.29	0.19	-0.26	0.20	-0.26	0.20
Divorced			0.21	0.12	0.21	0.12	0.18	0.13	0.18	0.13
Widowed			0.21	0.15	0.21	0.15	0.21	0.15	0.21	0.15
Daily informal care tasks (Grand)Children			-0.28*	0.15	-0.28*	0.15	-0.33*	0.15	-0.33*	0.15
No children (ref)										
Children, no grandchildren			0.14	0.15	0.14	0.15	0.23	0.17	0.22	0.17
Grandchildren, no daily care			0.13	0.14	0.13	0.14	0.20	0.16	0.20	0.16
Grandchildren, daily care			0.02	0.18	0.02	0.18	0.12	0.20	0.12	0.20
<i>Country level</i>										
Expenditure on pensions					-0.37	0.19			-0.31*	0.15
Norm: Work past retirement							0.22**	0.07	0.19**	0.06
Var (intercept)	0.54**	0.20	0.53**	0.20	0.42*	0.16	0.31*	0.12	0.23*	0.09

Source: SHARE, wave 4, 2011. Level 1:  $N = 10469$ . Level 2:  $N = 16$ .

\*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$ .

a. Switzerland excluded: Level 1:  $N = 9891$ . Level 2:  $N = 15$ .

Next, we included the country-level variables into the explanatory model for bridge employment among men. In model 3, we included expenditure on pensions in the analysis. In model 4, we tested the measure for normative support for working after retirement. Finally, in model 5, both these contextual factors were estimated simultaneously. Model 5 provides support for our hypothesis (Hypothesis 6) that bridge employment among men is more likely in countries where the expenditure on pensions is lower than in countries with relatively high pension expenditure (OR = 0.73). In addition, in line with Hypothesis 7, it was found that stronger support for the norm that older adults should be able to work



past retirement was associated with a higher likelihood of working in bridge jobs ( $OR = 1.21$ ).

Table 2.3 shows the estimated multilevel logit models for female retirees. Similar to the results for men, we found support for Hypotheses 1 and 2 in model 1, namely that highly educated ( $OR = 2.32$ ) and healthy ( $OR = 1.52$ ) women were more likely to participate in bridge jobs than their low-educated and unhealthy counterparts. For men, educational attainment showed a fairly linear relationship with participation in bridge employment, while for women it appeared that

Table 2.3. Multilevel logit model to predict bridge employment among female retirees.

	Model 1		Model 2		Model 3		Model 4 <sup>a</sup>		Model 5 <sup>a</sup>	
	Logit	SE	Logit	SE	Logit	SE	Logit	SE	Logit	SE
<i>Individual level</i>										
Age										
60–63 (ref)										
64–67	-0.65**	0.08	-0.66**	0.08	-0.66**	0.08	-0.69**	0.08	-0.69**	0.08
68–71	-1.00**	0.09	-1.00**	0.09	-1.00**	0.09	-1.01**	0.09	-1.01**	0.09
72–75	-1.86**	0.12	-1.89**	0.12	-1.89**	0.12	-1.86**	0.13	-1.86**	0.13
Educational attainment										
Low (ref)										
Middle	0.12	0.11	0.11	0.11	0.10	0.11	0.21	0.12	0.20	0.12
High	0.84**	0.12	0.83**	0.12	0.83**	0.12	0.95**	0.13	0.93**	0.13
Health status	0.42**	0.04	0.42**	0.04	0.43**	0.04	0.44**	0.04	0.44**	0.04
Receipt of occupational pension	-0.28*	0.12	-0.31**	0.12	-0.30*	0.12	-0.39**	0.14	-0.38**	0.14
Marital status										
Married (ref)										
Never married			0.56**	0.16	0.56**	0.16	0.48**	0.17	0.48**	0.17
Divorced			0.55**	0.09	0.55**	0.09	0.53**	0.10	0.53**	0.10
Widowed			0.37**	0.09	0.36**	0.09	0.36**	0.09	0.36**	0.09
Daily informal care tasks			0.07	0.13	0.07	0.13	0.08	0.13	0.08	0.14
(Grand)Children										
No children (ref)										
Children, no grandchildren			0.38*	0.16	0.38*	0.16	0.36*	0.17	0.36*	0.17
Grandchildren, no daily care			0.25	0.14	0.25	0.14	0.26	0.15	0.26	0.15
Grandchildren, daily care			0.02	0.19	0.01	0.19	0.05	0.20	0.04	0.20
<i>Country level</i>										
Expenditure on pensions					-0.56**	0.19			-0.49**	0.12
Norm: Work past retirement							0.26**	0.08	0.22**	0.06
Var (intercept)	0.69**	0.26	0.68**	0.26	0.43*	0.17	0.36*	0.14	0.15*	0.07

Source: SHARE, wave 4, 2011. Level 1:  $N = 12019$ . Level 2:  $N = 16$ .

\*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$ .

a. Switzerland excluded: Level 1:  $N = 11367$ . Level 2:  $N = 15$ .

specifically those with highest level of educational attainment participated in bridge jobs. In line with Hypothesis 3, we found that women who received an occupational pension were less likely to participate in bridge jobs ( $OR = 0.76$ ). In addition, the findings in model 1 showed that the likelihood of participating in bridge jobs decreased with increasing age.

In model 2, we included the variables for marital status, informal care for others, and care for grandchildren. Women who were never married ( $OR = 1.75$ ) or who were divorced ( $OR = 1.73$ ) were found to be much more likely to participate in bridge jobs compared to their married counterparts (Hypothesis 4). Additional analyses testing the interaction between gender and marital status (data not shown) also revealed that divorced women were significantly more likely than their male counterparts to work in bridge jobs. In contrast to the findings for men, we did not find differences in bridge job participation between those women with and those without daily informal care tasks (Hypothesis 5). Finally, there was no support for our expectation (Hypothesis 5) that women who look after their grandchildren almost every day are less likely to work in bridge jobs after retirement.

Next, we added the country-level factors. In model 3, we included the level of expenditure on pensions. In model 4, we tested the normative support for working after retirement. Finally, these country-level factors were estimated simultaneously in model 5. The results provide support for our hypothesis (Hypothesis 6) that bridge employment among women is less likely in countries with higher levels of pension expenditure ( $OR = 0.57$ ). In line with Hypothesis 7, we found that normative support for work past retirement was positively associated with bridge employment ( $OR = 1.30$ ).

In addition to presenting the results of the multivariate analyses on the relationship between contextual factors and bridge employment (models 3 to 5) in Tables 2.2 and 2.3, we also illustrate these relationships graphically. Figures 2.3 (men) and 2.4 (women) depict the scores for the contextual variables as related to the share of retirees participating in bridge jobs. While a negative association between bridge employment and expenditure on pensions is shown in Figure 2.3a, a positive relationship between bridge employment and normative support for working after retirement is shown in Figure 2.3b. The same associations can be observed in Figures 2.4a and 2.4b for female retirees. Overall, Figures 2.3 and 2.4 illustrate that specific economic and social aspects of the pension context may have different effects on the likelihood of participation in bridge employment.

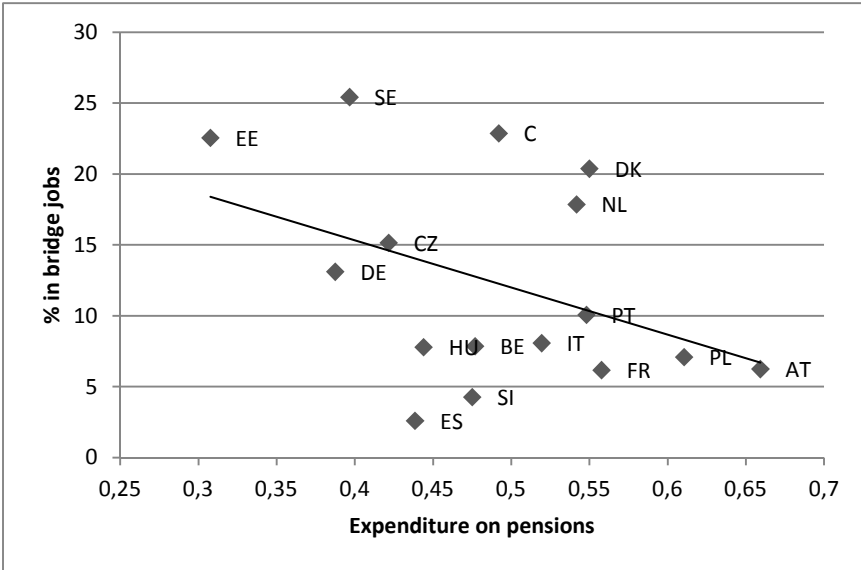


Figure 2.3a. *Expenditure on pensions and participation in bridge jobs among male retirees by country (SHARE, 2011).* Note: for country ID's, check appendix A1.

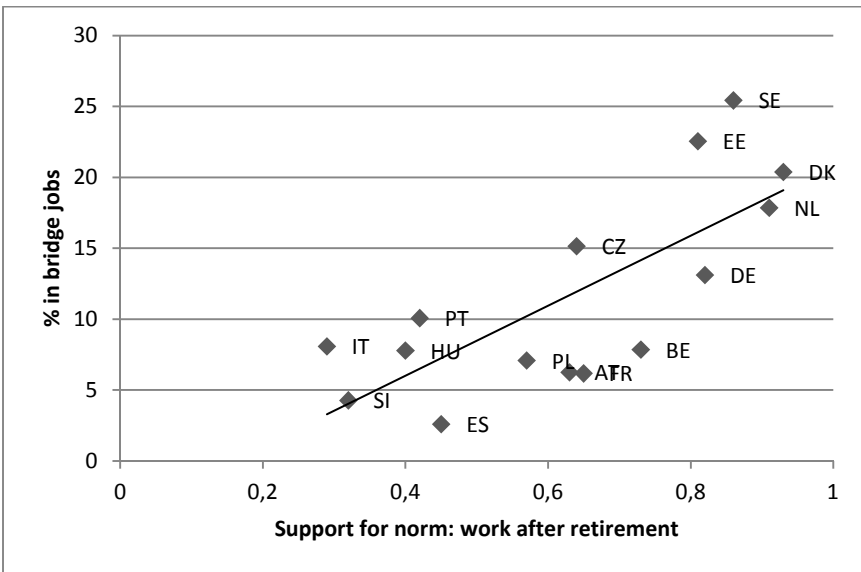


Figure 2.3b. *Support for the norm to work after retirement and participation in bridge jobs among male retirees by country (SHARE, 2011).* Note: for country ID's, check appendix A1.

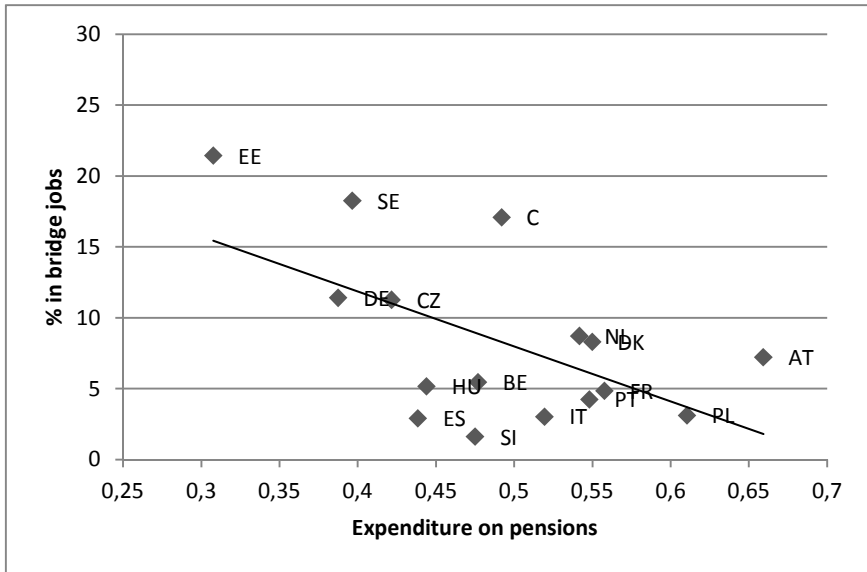


Figure 2.4a. *Expenditure on pensions and participation in bridge jobs among female retirees by country (SHARE, 2011).* Note: for country ID's, check appendix A1.



Figure 2.4b. *Support for the norm to work after retirement and participation in bridge jobs among female retirees by country (SHARE, 2011).* Note: for country ID's, check appendix A1.

## 2.5 Discussion

In the current study, we investigated the determinants of bridge employment in Europe by using comparable data for 16 European countries. The results of the study reveal that the number of retirees working in paid employment while receiving pensions differs widely across Europe, with Estonia, Sweden and Switzerland having the highest levels of participation. Bridge employment is less common in countries such as Spain, Slovenia and Poland. The difference between men and women also varies to a large extent across countries. Even though the general conclusion is that men are more likely to participate in bridge jobs after career exit, in countries such as Austria, Spain and Estonia the differences between men and women are rather small.

To find an explanation for these differences in bridge employment across Europe, we incorporated two sets of factors into our model, namely individual-level factors and country-level factors. Both sets of factors proved to be highly relevant in explaining bridge employment, which is in accordance with the assumption in life course theory that life transitions are strongly embedded in the wider social context (Settersten, 2003). At the country-level, the results of our investigation show that when more economic (pension) resources are available, older adults tend not to undertake paid employment after retirement. At the same time, we also found that a supportive environment regarding the combination of work and retirement is positively associated with participation in bridge employment. This suggests that not only economic incentives, but also normative signs regarding the prolongation of work careers after retirement influence the decision-making process regarding bridge employment. The current demographic trend of an aging population threatens the affordability of pension arrangements (Bongaarts, 2004), so politicians and policymakers may seek to increase awareness that extending working life may be crucial in supporting our consumption level and welfare provision over a longer lifespan (Maestas & Zissimopoulos, 2010) and, as such, stimulate the desire among individuals to continue to work post-retirement.

At the individual level, we found bridge employment to be particularly likely among highly educated and healthy retirees. As such, this seems to provide additional support for the idea that these groups of retirees are most likely to be intrinsically motivated and committed to work (Jones & McIntosh, 2010; Wang, et al., 2008), while at the same time having more opportunities to continue working after retirement compared to their lower-educated and less healthy counterparts (Dingemans, et al., 2015; Ekerdt, 2010; Komp, et al., 2010). When we control for these aspects, our results also show that retirees with occupational pensions are less likely to continue working after retirement than those with only public pensions. This seems to suggest that dependency solely on public benefits pushes retirees back into employment to supplement their retirement income.

This closely aligns with current ideas in policy discussions on ways to stimulate different forms of supplementary pensions, such as occupational pensions and savings, as a means to make retirees more self-reliant rather than fully relying on (various forms of) public benefits. However, there is a risk associated with this approach, namely that full retirement may become a reality only for well-off retirees, while those in lower socioeconomic strata may be forced to rely on a fourth pillar of pension income, namely paid work (Bowman, 2014; Larsen & Pedersen, 2013). Another specific risk group found in the current study is that of divorced women. In line with previous research conducted in the United States (Pleau, 2010), the results suggest that they may be an economically vulnerable group in retirement.

The current investigation has several strengths as well as some limitations that need to be taken into account when interpreting the results. A clear advantage of our approach is that we can compare the extent to which European retirees combine income from paid work with pension benefits, and as such we are among only a handful of researchers to provide insights on cross-national variation in participation in bridge jobs. In addition, the investigation of the explanatory model of bridge employment in terms of cross-national data has enabled us to unravel contextual factors that relate to participation in bridge employment. However, one of the limitations of the study is that even though financial resources are found to be important individual-level determinants in some studies (Cahill, et al., 2006; Warren, 2015), the inclusion of specific information on income or wealth in the current study was problematic because a large amount of such information was missing from the SHARE data. Moreover, these measures could be assumed to suffer from problems of endogeneity because they could be affected by the bridge job status of the retirees. For instance, income measures, such as the income from pension benefits, might be lowered as a result of earnings tests, which are applied in some countries to allow for the combination of income from paid work and pension benefits (OECD, 2011). Therefore, further research is needed to explore the effect of private financial resources on the decision to take up bridge employment.

We also need to recognize some other limitations with regard to the dataset used. One clear limitation is the cross-sectional nature of our research. Despite the panel character of the SHARE data, the limited number of retirement transitions hampers a longitudinal investigation of our research questions. Consequently, the cross-sectional design limits any causal interpretation of the findings, such as determining the effect of normative aspects on behavior. Further research is therefore needed to increase our knowledge on the direction of this relationship, which could thereby improve our understanding of the reciprocity of norms, values, and behavior. Another limitation is that only a limited number of country-level factors could be investigated simultaneously because only 16 countries were

included in our dataset. Further scientific investigation of other potential contextual determinants, such as labor market characteristics, juridical aspects of pension systems, and the influences of policies in other life domains that may constrain or enable paid employment would also be of benefit to policymakers. Finally, it must also be noted that the results of the study cannot be generalized to Europe in general because only a non-random selection of European countries was investigated.

To conclude, in line with the key tenets of life course theory (Settersten, 2003), our study shows that bridge employment is not driven solely by individual-level determinants, but also strongly depends on influences from the broader social environment, such as the economic and normative characteristics of pension contexts. With the prospect of the potential unsustainability of pension systems because of their reliance on transfers from the younger to the older generation in a pay-as-you-go public pension mechanism (Bongaarts, 2004), policymakers and politicians would benefit greatly from increased insights on the contextual characteristics of post-retirement life and their association with the decision or need to extend working life. Further research in this field could help them to identify and implement policy reforms in order to deal with the changing demographic landscape and those changes particular to the composition of their respective workforces.

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