

# Work–family balance in the second half of life: Caregivers' decisions regarding retirement and working time reduction in Europe

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## Funding information

Deutsche Forschungsgemeinschaft, Grant/Award Number: STR1322/2-1; H2020 Marie Skłodowska-Curie Actions, Grant/Award Number: 749443

## Abstract

This article investigates how different types of informal caregiving – upward, lateral and downward – impact men's and women's decisions to retire or to reduce their working hours, and how welfare policy characteristics moderate the linkage between informal care provision and employment participation. The analyses are based on six waves from the Survey of Health, Ageing and Retirement in Europe (SHARE). We exploit the data's longitudinal structure by applying fixed-effects regression models with lagged, time-varying country characteristics. The results show that, in most cases, upward caregiving to parents is less relevant for deciding to remain in the labour market than lateral care (especially to siblings, friends and neighbours) and downward grandchild care. The welfare context moderates the impact of caregiving on labour market participation, with variation between the different types of care provided.

## KEYWORDS

Europe, intergenerational relationships, kinship structure, labour market participation, unpaid care, welfare policy

## 1 | INTRODUCTION

For many people, increased life expectancy has led to a situation in which they share their lives with family members for longer periods of time (Chapman, Lahdenperä, Pettay, & Lummaa, 2017). This has resulted in increased and more

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varied inter-dependencies that reflect stronger intergenerational relations and more reciprocal support. Often, upward (i.e., care provided to parents or members of an older generation) and downward (i.e., care provided to one's children or grandchildren) caregiving responsibilities not only compete with one another but may add up: individuals who are more inclined to provide care may well do so in both directions (Luppi & Nazio, 2019). This may lead to a group of "sandwiched" caregivers, who are confronted with various demands both from above and below (Patterson & Margolis, 2019). Furthermore, caregiving needs may also arise from the side, in the form of lateral caregiving. We define lateral care quite broadly as providing care to someone of the same generation within the kinship structure (i.e., partners or siblings) or as providing care to someone who is not part of the same kinship network but roughly belongs to a similar cohort (such as friends or neighbours). Since it is a common policy trend in most European countries to prolong working life, it is important from a welfare state perspective to understand how men and women combine employment and informal caregiving during the second half of life. This should help us to understand how different types of informal caregiving impact on individuals' decisions to leave the labour market or remain employed, with or without working time reductions.

Although a number of studies have addressed the linkages between participation in the labour market and the provision of informal care in the second half of life, their results are mixed (for an overview, see Moussa, 2019). While some studies find an effect of informal elder-care provision on labour market participation (Lilly, Laporte, & Coyte, 2010; Van Houtven, Coe, & Skira, 2013), others do not (Ciani, 2012; Michaud, Heitmueller, & Nazarov, 2010). Further studies suggest that only women's employment participation is influenced by informal caregiving, while men's caregiving is not related to their labour market participation (Carr et al., 2018; Lee & Tang, 2015).

In order to contribute to a better understanding of these mixed results, we (a) differentiate between different recipients of care and try to explain how these different forms of caregiving affect labour market participation differently, and (b) investigate how the effects of different types of caregiving on labour market participation are moderated by the welfare policy context. Our research questions thus are read as follows: how do different forms of informal caregiving (upward, lateral and downward) influence the likelihood of leaving the labour market and changes in working hours? How is the influence of informal caregiving on labour market participation moderated by the policy context?

Our empirical analyses use data from six waves of the Survey of Health, Ageing and Retirement (SHARE). We exploit the longitudinal structure of the data by using fixed-effects regression models to explain labour market exits and the reduction in working hours, thought of as competing alternatives in responding to care demands. We explain employment reductions through changes in three types of caregiving (upward, lateral and downward) and their interaction terms with time-varying country characteristics, namely two eldercare policy schemes and the childcare infrastructure.

## 2 | THEORETICAL BACKGROUND AND PREVIOUS EMPIRICAL EVIDENCE

### 2.1 | Reconciling employment and informal care

When addressing the question of why informal caregiving impacts people's labour market behaviour, classical human capital theory argues that employment and other unpaid activities, such as informal caregiving, compete for a person's time and resources. The higher the caregivers' (expected) opportunity costs, that is, the forgone income that they could (potentially) earn on the labour market, the less likely it is that they would retire or reduce their working hours for the sake of informal caregiving (Becker, 1965). Due to men's and women's different opportunity structures, these decisions can, however, be expected to be gendered, which is why it seems important to have gender-separate analyses. Empirical research results are, however, rather mixed: Whereas some studies (Henz, 2006; Michaud et al., 2010) find only a small effect of caregiving on employment or none at all, others suggest that the causal

direction is gender-specific (Lee & Tang, 2015; Nguyen & Connelly, 2014). Comparative studies by Crespo and Mira (2014) and Kotsadam (2011) suggest that these linkages are mainly prevalent in Southern Europe.

A shortcoming of this literature is that it treats informal caregiving as a universal phenomenon, which it is not. Caring for parents is quite different from caring for spouses, siblings, grandchildren, friends or neighbours. This has to do with the fact that the likelihood of becoming a caregiver to a person who belongs to one of these groups differs according to the caregiver's age group, as well as with the kinship structure into which such caregiving is embedded. As the literature suggests, decisions regarding employment and informal caregiving are mostly taken within the extended family (see Hank, Cavrini, Di Gessa, & Tomassini, 2018, for grandchild care; see Henz, 2006, for care to parents). The relevant kinship structures influencing these decisions are the number of potential care receivers from above, the side and below the (expected) duration of caregiving spells, the intensity of the required care and the availability of other caregivers (including partners, siblings, children, friends and neighbours) (Grigoryeva, 2017; Luppi & Nazio, 2019). Finally, the motivations to provide care and/or to remain in the labour market might also depend on economic considerations, normative expectations and intrinsic motives (for an overview of all factors, see Table 1).

First, with regard to age, upward caregiving tends to take place earlier in life. The literature suggests that it is most prevalent between the ages of 40 and 60 (Patterson & Margolis, 2019; Principi et al., 2012), whereas lateral caregiving is more likely to occur later in life, often after retirement (Moussa, 2019, p. 1292). While the risk of having to provide upward care greatly diminishes with age, the number of lateral care receivers diminishes more slowly. Finally, the number of recipients of downward care increases with the arrival of grandchildren (Bordone, Arpino, & Aassve, 2016). Respondents in our analytical sample in SHARE have 2.1 children on average (with the youngest child being 34.5 years old on average) and two grandchildren (with the youngest grandchild 1.3 years old on average). Thus, the window for becoming a grandparent or having a further grandchild is not yet closed for the population under study. The larger the number of potential care receivers and the longer the expected duration of the caregiving engagement, the more likely it is that a type of caregiving will lead to labour market withdrawal or a reduction in working hours. This would lead to the expectation that the strongest effect can be found in downward caregiving and the weakest effect in upward caregiving (see second column in Table 1).

Second, with regard to the availability of other caregivers, individuals who provide upward care are more likely to have other family members with whom they can share the caregiving duties for their parent (or parent-in-law), e.g., siblings, partners and the other parent, if he or she is healthy (see third column in Table 1). Caregiving shared within a larger support network should, therefore, less strongly affect the decision to leave the labour market. Regarding downward (grandchild) care, grandparents are most often not the primary caregiver. Instead, they themselves often function as a support network because the main caregiving responsibility lies with the grandchild's

**TABLE 1** Characteristics of different types of caregiving and their impact on employment

	Number of receivers, duration	Availability of other caregivers	Other considerations	Overall expected effect
Upward	Decreasing, shorter duration, only <i>weak</i> effect	Shared among different generations, <i>weak</i> effect		Weakest effect
Lateral	Slowly decreasing, longer duration, <i>moderate</i> effect	Spousal: Most often solo. Other lateral: Not primary. <i>Effects might offset each other</i>	Added worker effect for spousal care, <i>weaker</i> effect	Moderate effect
Downward	Increasing, longest duration, <i>strongest</i> effect	Not primary caregiver, <i>weak</i> effect	Rewarding and intrinsic motivation, <i>stronger</i> effect	Strongest effect

Note: Own illustration.

parents. However, if the child has higher labour market resources than the parent, it might be sensible for the family as a whole to shift part of the regular childcare to a grandparent. This, in turn, might make it more difficult to provide caregiving to the grandparents. With regard to lateral care, we might expect the influence of such care on labour market participation to depend on who receives care. Particularly for spouses, there are strong normative expectations to provide care (Arber & Ginn, 1994). Thus, spousal caregivers are often solo caregivers (Bertogg & Strauss, 2018; Feld, Dunkle, Schroepfer, & Shen, 2010). This should make it more difficult to reconcile caregiving and employment, as the caring burden is placed on only a few shoulders. However, these circumstances are likely to be different in the context of lateral care provided to siblings or non-kin persons (i.e., friends and neighbours). Individuals who provide lateral care to non-kin or siblings may be part of the “helper network” rather than being the primary caregivers themselves. Childless and non-partnered care receivers are an exception to this. This group of people has been shown to rely more heavily on friends and neighbours (Schnettler & Wöhler, 2015). Given that the category of “lateral care” is quite heterogeneous, it is plausible to assume that some of the effects for these specific sub-groups might offset each other. One could thus expect a somewhat stronger effect of lateral caregiving and a weaker effect of upward and downward caregiving on labour market participation (see the third column of Table 1).

Third, there may be further considerations influencing the decision to leave the labour market to become a caregiver (see the fourth column in Table 1). On the one hand, a healthy (and caregiving) spouse may remain in employment to compensate for the loss of their spouse's income (“added worker effect,” Coile, 2004; Kim, Lee, & Halliday, 2018). However, this will mainly affect co-residing, and, therefore, spousal caregiving arrangements. On the other hand, among the three types of caregiving, care provided to grandchildren is likely to be the most socially and emotionally rewarding. A number of studies indicate that grandchild care is not merely provided because it is needed but because many grandparents are intrinsically motivated to spend time with their grandchildren and to see them grow up (Hank et al., 2018; Silverstein, Giarrusso, & Bengtson, 2003). It is thus plausible to assume that the transition to (further) grandparenthood and associated grandchild care is what affects labour market participation most strongly among these three types of caregiving. Taken together (see last column in Table 1), we formulate the hypothesis that:

**H1** *The likelihood of leaving the labour market or reducing working hours is strongest for downward caregiving; it is moderately strong for lateral caregiving and weakest for upward caregiving.*

## 2.2 | Welfare policy as a moderator of reconciliation strategies

The country-specific context may influence caregivers' decisions regarding (reduced) employment participation in several ways. First, countries differ with regard to the demographic profile and the kinship structures elderly individuals live in. This affects the need for informal care and the availability of other caregivers, and hence also the density of caregiving and labour market transitions (Leopold & Skopek, 2015). Second, welfare policies constitute the context for individual decisions (Börsch-Supan & Nistico, 2007). This affects both decisions regarding the provision of informal care and labour market decisions. It is thus plausible to assume that the linkage between these two activities, too, is affected by the policy context.

During the last 30 years, a number of welfare state typologies, with regard to social policies in Europe, have been proposed (Arts & Gelissen, 2002; Ferragina & Seeleib-Kaiser, 2011; Ferrera, 1996). These ideal types often have a considerable overlap with regards to the clustering of countries, but are relatively unspecific and are constructed from a broad variety of policy indicators (for a detailed discussion, see Kunissen, 2018). More specific welfare typologies with an explicit focus on the provision and organization of care often differentiate between “familizing” and “de-familizing” (see, e.g., Leitner, 2003; Saraceno & Keck, 2010), as well as between “gendering” and “de-gendering” welfare states (Daly, 1994). Familizing welfare states are characterized by relying on unpaid informal care being provided by family members, and offering little formal support for caregivers. De-familizing welfare states are often guided by the idea of enabling old and frail individuals an independent life, and by providing the services

needed therefore (Cho, 2014). The policies in the realm of childcare, eldercare and employment also have an effect on gender relations and the division of labour between couples. "Gendering" welfare states heavily relies on unpaid care work by women who are only weakly attached to the labour force and are thus characterized by policy instruments that support or promote a traditional gendered division of labour. Respective policies comprise cash benefits, financial transfers to caregivers (the so-called "Cash-for-care" policy schemes) as well as long maternity leaves with low wage replacement rates. "De-gendering" welfare states, on the other hand, are characterized by the aim of increasing female and maternal labour market participation and enabling caregivers to remain employed. In these welfare states, publicly provided or subsidized services (also called "Care-in-Kind" schemes), such as day care centres and home care services, dominate.

Studies comparing the uptake of elder and grandchild care or caregivers' labour market participation indicate that, in welfare states with cash benefits, caregivers are more likely to care intensively (Brandt, Haberkern, & Szydlik, 2009) or alone (Bertogg & Strauss, 2018), and are less likely to be integrated into the labour market (Le Bihan, Da Roit, & Sopadzhiyan, 2019), particularly if they are female. Conversely, welfare states that offer public elder and child care services do not "crowd out" family caregivers and reduce the likelihood of providing care per se (for an overview, see Broese van Groenou & De Boer, 2016), but reduce the intensity (Brandt et al., 2009) and promote a more equal sharing between the genders (Schmid, Brandt, & Haberkern, 2012).

We can thus formulate three mechanisms through which the three different types of care (upward, lateral and downward) affect caregivers' labour market participation. First, with regard to upward and lateral care, the formal provision of services directly to the care-receiver (care-in-kind) should enable caregivers to remain in employment because their care provision is less likely to be intensive and more likely to complement formal services. Second, policy schemes that enable informal caregivers to take care of their relatives (cash-for-care) should lead to caregivers giving up employment, because they motivate predominantly those individuals with a weak labour market attachment to take over caregiving duties, which are then often intensive and time-consuming (Czaplicki, 2012; Frericks, Jensen, & Pfau-Effinger, 2014; Le Bihan et al., 2019). We thus formulate the following hypothesis with regard to upward and lateral care:

**H2** *Higher expenditure for cash-for-care increases upward and lateral caregivers' labour market exits and decreases their working hours, care-in-kind expenditure decreases upward and lateral caregivers' labour market exits and increases their working hours.*

Third, a similar mechanism can be assumed to work for downward care. The degree to which the welfare state organizes childcare directly influences the need for grandparental childcare (Janta, 2014), as well as its intensity (Igel & Szydlik, 2011). Thus, grandparents in countries with a well-developed formal childcare infrastructure are more likely to provide sporadic and stand-in, but less regular childcare (Bordone et al., 2016), which is more compatible with employment. We, therefore, assume the following hypothesis:

**H3** *Higher expenditure on formal childcare decreases caregiving grandparents' labour market exits and increases their working hours.*

## 2.3 | Data, method and analytical strategy

## 2.4 | Data and sample

The empirical analyses are based on data from the Survey of Health, Ageing and Retirement in Europe (SHARE) (Börsch-Supan, 2019; Börsch-Supan et al., 2013). We used six waves collected between 2004 and 2017 (Waves 1, 2,

4, 5, 6 and 7). Wave 3 captures only retrospective information and was, therefore, not used. All in all, we have information from respondents in 18 countries, in which the SHARE survey was collected in at least two subsequent waves. These countries are Austria (AT), Belgium (BE), Switzerland (CH), Czech Republic (CZ), Germany (DE), Denmark (DK), Estonia (EE), France (FR), Greece (GR), Croatia (HR), Italy (IT), Luxembourg (LU), the Netherlands (NL), Poland (PL), Portugal (PT), Slovenia (SI), Spain (ES) and Sweden (SE).

The SHARE sample consists of individuals aged 50 or older, however, co-residing children or partners who are younger may (but did not have to) participate as well. Our analytical sample consists of individuals aged 50–68 living in a private household, as well as their spouses or co-habiting partners in the same age range. This age range was chosen to capture persons who were likely to face caregiving duties (Patterson & Margolis, 2019) and retirement transitions (Hairault, Langot, & Sopraseuth, 2010). Our study makes use of the longitudinal design, meaning that our unit of observation is person-years. In total,  $n = 58,134$  individual respondents aged 50–68 were observed at least twice, equalling to  $n = 163,953$  person-year observations (see Figure S1 for a flow diagram representing the sample selection). These observations constitute our analytical sample. We have an unbalanced panel with 2.2 observations per individual on average (see Table S1 for more detailed information on case numbers).

## 2.5 | Analytical strategy

Our analyses encompassed two steps. In the first step, we tested whether the three types of caregiving influence labour market exit and working hours (for those who remain employed) by estimating fixed-effects logistic regression models (for labour market exit) and fixed-effects linear regression models (for working hours). As previous studies have suggested that male and female caregivers differ substantially with regard to caregiving arrangements (Bertogg & Strauss, 2018; Feld et al., 2010; Schmid et al., 2012) and caregiving outcomes (Carr et al., 2018; Swinkels, Van Tilburg, Verbakel, & Broese van Groenou, 2019), we fit gender-specific models. In the second step, we included interaction terms between the caregiving variables and the time-varying contextual variables (described in detail in the following section). We focused on the relevant linkages and only estimated interaction terms between eldercare policy and upward/lateral care, and between childcare policy and downward care. In total, we present 12 models: Six for each sub-sample of women and men, three thereof for each of the two dependent variables, testing for the country-level indicators and their interaction terms separately.

A number of additional model estimations ensured the robustness of our results. For the first, we distinguished between spousal care and care provided for other lateral care receivers (see Table S3). We also ran random effects models, which relax the restriction of only having “changers” in our sample (Table S4). Moreover, we used alternative measures for our time-varying country variables and we also included more general welfare regimes indicators, such as overall social expenditures and regime typologies (results available on request). Because education affects both labour market participation and caregiving and may thus also affect the linkage between these two activities, we ran different models for three educational groups (Table S5). Finally, in order to rule out the possibility that a gender-unequal access to the labour market confounded the effects of these contextual-level variables, we estimated all our models with contextual-level indicators also while controlling for either the employment rate of the female population aged between 50 and 65, for the female employment rate in the overall active population, or for the gender gap in employment between men and women (not displayed). Our findings remained unaffected by these controls.

## 2.6 | Measures

In order to capture the changes in labour market participation, which can be realized either by withdrawing from or reducing employment, we looked at both labour market exits (i.e., the transition to retirement or inactivity) and weekly working hours. Both leaving the labour market and reducing working hours can be alternative strategies to

deal with reconciliation issues. The former was derived from the self-reported current job status, which was assessed in every wave. The original variable with seven categories was recoded into a dichotomous variable with two variables (0: (self-) employed (full- or part-time), 1: retired or inactive (including unemployed persons and homemakers)). The latter variable was derived from the self-reported variable on real weekly working hours (as opposed to contracted working hours), which was assessed in each wave when a respondent was employed. Inconsistent or unrealistic values in this working hour variable were excluded from the analyses (i.e., observations reporting being in employment but working zero hours or working more than 70 hours per week). To check for the robustness of our findings, we also ran models including these cases, which did not change the results.

Our modelling approach requires that a respondent exhibits variation in the dependent variable over time in order to be included. Thus, the analytical samples for the two dependent variables will differ. At baseline, our valid sample (consisting of individuals aged 50–68 with at least two survey waves) holds about 50% employed men and 40% employed women, of which 23% (men) respectively 18% women leave the labour market during our window of observation. In our valid sample, 31% (men) and 36% (women) enter the survey already as caregivers, and another 21% (men and women) take up some sort of caregiving during their survey participation. Variation over time is thus considerable and justifies our model selection. With regard to our first dependent variable, namely labour market exits, only those individuals who change between being employed and being not employed enter the models (23%). On average, we observe our individuals about three times. For working hours, both “changers” as well as those who remain employed may enter the model, as long as they exhibit at least two subsequent observations being employed and with valid information on working hours (which is not the case for all changers). This applies to 52% of our valid baseline sample (persons), for which we observe, on average, 2.8 person-years. More details regarding these case numbers can be found in Table S1 and in the flow diagram in Figure S1.

Our main explanatory factor at the individual level is reported caregiving, measured with three dichotomous variables referring to upward, downward and lateral caregiving. Previous research has indicated that frequent care most prominently plays a role for labour market exits (for grandchild care, see Backhaus & Barslund, 2019; for an overview on eldercare, see Moussa, 2019). We thus identified regular caregivers, defined as those providing care at least weekly. Information on caregiving was collected in all waves with the question, whether the respondent had provided help or care to someone else inside or outside their household in the last 12 months (1 = yes), and – if so – to whom. However, the caregiving module was not collected in wave 7 for those participants who had taken that wave as a purely retrospective survey. Information on caregiving frequency was only asked to those caregivers who provided help or care to someone outside their own household. Assuming that live-in care is intensive and takes place regularly, we treat all caregivers inside the household as regular caregivers. *Upward* caregivers provide help or care for a biological or adoptive parent, a parent-in-law or a step-parent who lives either inside or who lives outside the respondent's household and receives care at least weekly. For *downward* caregiving, we focused on at least weekly provision of grandchild care, as well as at least weekly provision of practical help or care for a (biological or step-) child (or a child-in-law) living in another household within the last 12 months (1 = yes). Finally, *lateral* care is defined as care provided within the last 12 months for either one's partner within the same household or at least weekly care for a third person who is not a partner, parent, child or a grandchild and lives in a different household.

We relied on two indicators to measure eldercare policy. Public expenditure on old-age care is measured per capita in 1000 USD, PPP-adjusted and at constant prices for two different policy schemes, namely benefits (cash-for-care) or services (care-in-kind). Both of these figures were provided by the OECD (2017). With regard to the childcare infrastructure, we constructed a measure of expenditure on early childhood education and care (ECEC) per child under the primary school starting age. This measure was also used by Hook and Paek (2020). The figures on expenditure were taken from the OECD (2019) and measured at constant price levels (with reference to the year 2010). These figures were divided by the number of children under the age of five in each country (Eurostat, 2019). Thus, our measure depicts the annual spending per potential client in 1000 EUR per year, adjusted for both economic trends and the age-composition of the context, and thus made comparable over time and across countries. All three country indicators take on distinct values for each country and year. Before incorporating these values into our

models, we lagged them by 1 year and centred them at their grand mean. Grand-mean centring allows us to interpret the main effects of cross-level interactions between contextual factors and individual-level caregiving as to the effect that caregiving has in a context with average expenditure on eldercare or childcare.

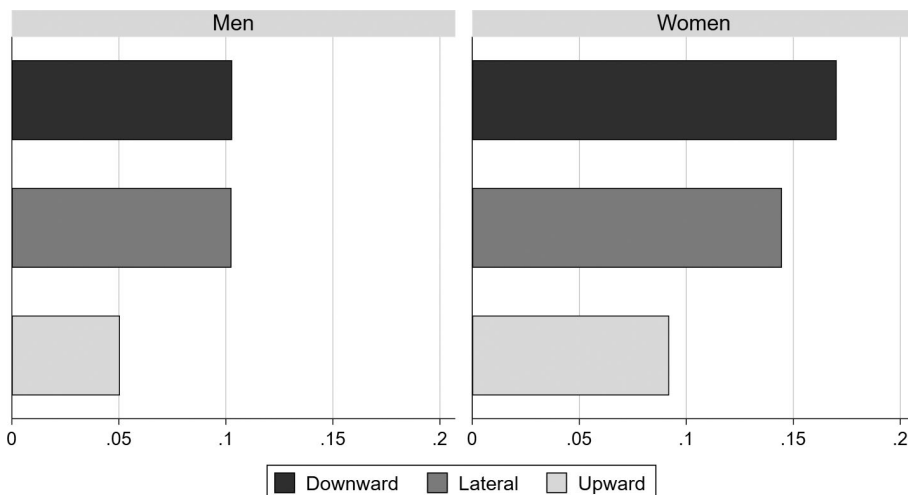
## 2.7 | Control variables

We included a number of variables as controls in our models (see Table S2 for details). Respondents' ages at the time of their wave's interview were grouped into 5-year groups (50–54, 55–59, 60–64 and 65–68) to allow for non-linearity. As the transition to retirement is most likely to occur around the official retirement age, we also controlled for the individual amount of time until (or since) the country- and year-specific statutory retirement age (measured with three categories: more than 2 years before the retirement age; 2 years around it; and more than 2 years over the retirement age). As functional health is also an important predictor for leaving the labour market or reducing working hours, we included the sum of the self-reported number of mobility limitations and ADL limitations. We also included a categorical variable that combines information on whether the respondent lives with his or her partner and the partner's employment status. In order to control for whether someone is likely to provide care in the first place, we included three dummy variables indicating whether the respondent has at least one living parent (0 = yes, 1 = no), whether he or she has (step- or adoptive) children (0 = yes, 1 = no) and grandchildren (0 = yes, 1 = no; may include non-biological grandchildren as well as children of a child's new partner). As childcare demands are more intense for younger children, we included the age of the youngest grandchild and assigned those without any grandchildren the value of "0." Finally, we included wave fixed effects. All models with contextual variables furthermore control for GDP per capita.

## 3 | FINDINGS

### 3.1 | Descriptive findings

We display the occurrence and frequency of care provided upward, downward and laterally in Figure 1 (below). Among the person-year observations in our sample, men report 5% of their observed person-years as providing upward care at



**FIGURE 1** Share of informal caregiving among person-year observations. Sample: Individuals aged 50–68 with at least two observations. Own calculations.  $n = 158,136$  person-years, in  $n = 56,100$  persons



least weekly, whereas for women, the share lies at about 9%. With regard to downward care, women report around 17% of their person-years as providing grandchild care at least weekly, whereas for men, this percentage lies at around 11%. Respondents report that they provide lateral care in around 11% (men) or 14% (women) of the person-year observations. Additional analyses (not displayed here) have shown that the majority of these lateral care receivers are either spouses or partners (26%), siblings (8%), neighbours (20%) and friends (16%). A significant group is undetermined, that is, the respondents did not disclose to whom help was given or chose the "other" category (19%).

## 3.2 | Multivariate results

### 3.2.1 | Individual characteristics

Table 2 presents the coefficients of the individual-level time-varying variables from the fixed-effects models. These types of models explain the changes in the dependent variable (here: leaving the labour market, working hours) with the changes in the independent variables (taking up different types of caregiving). The coefficients can be interpreted as follows: the likelihood of leaving employment increases by about 6% ( $\exp(0.059)=1.060$ ) and working hours decrease by about 26 minutes per week ( $60*(-0.432)\approx-26$ ) if a woman starts caring for a parent. Men who start caring for a parent have an approximately 9% higher chance of leaving the labour market ( $\exp(0.059+0.025)=1.087$ ) than men who do not take up a caring responsibility. They increase working hours by about 3 min ( $60*(-0.432+0.490)\approx 3.5$ ) if they start caring for a parent. None of these effects are statistically significant. When running these models separate by educational groups, however (Table S5), we see that the effects partly offset each other: Higher educated individuals are more likely to leave the labour market when starting to care, whereas intermediate education goes hand in hand with a lower likelihood of leaving the labour market when starting to care.

Providing lateral help or caring for other individuals, such as one's spouse, a friend or a neighbour, significantly increases the likelihood of leaving the labour market by about 23% ( $\exp(0.186 = 1.229)$ ) for women and about 13% ( $\exp(0.187-0.068=1.125)$ ) for men. Those women who remain employed reduce their weekly working hours by about 50 min ( $60*(-0.836)\approx 50$ ) if they start providing care laterally; for men, the working time reduction is less than 20 min ( $60*(-0.836+0.551)\approx-17$ ). Additional analyses, distinguishing between spousal care and caregiving for other lateral care receivers (see Table S3), indicate that the effect of lateral care is driven by caregiving to non-spouses. This appears to support the theoretical idea of an "added worker effect", whereby those caregivers who care at least weekly for a spouse are induced to remain in the labour market and also provide an income. To the contrary, those who care for someone within their own generation who is not their spouse, such as a sibling, friend or neighbour, not only have a healthy spouse to compensate for their lack of income, they might also do so because that person has no other potential caregivers to rely on, which suggests intensive caregiving duties (Schnettler & Wöhler, 2015). As an alternative interpretation, one could also suppose that non-spousal lateral care is mainly provided by persons who are already only weakly integrated into the labour market.

We detect a third, interesting pattern regarding downward care. For both men and women, the likelihood of leaving the labour market increases, namely by about 22% for women ( $\exp(0.200)=1.221$ ) and by about 73% ( $\exp(0.200+0.350)=1.733$ ) for men. Men are thus significantly more likely than women to leave the labour market if they start caring for a grandchild at least weekly. This might be explained by men who begin to provide grandchild care around the time they retire, whereas women might engage already in grandchild care when they are still employed. With regard to working hours, both caregiving grandmothers and grandfathers reduce their weekly working hours, on average, by about half an hour (28 respectively 34 min). We conclude that there is a greater likelihood of leaving the labour market for downward than for lateral caregivers, which is in line with our first hypothesis. For upward care, we find no significant effect. Overall, we find similar patterns for men and women with the exception of downward care.

**TABLE 2** Fixed effects regressions of employment participation on different types of caregiving

	Labour market exit	Working hours
Upward: Cares for parents at least weekly	0.059	-0.432
Male*Upward	0.025	0.490
Lateral: Gives help/care to other person than parents	0.186*	-0.836**
Male*Lateral	-0.068	0.551
Downward: Cares for (Grand-)Child(ren) at least weekly	0.200*	-0.471
Male*(Grand-)Childcare weekly	0.350*	-0.102
Partner is employed (ref.)		
Partner is retired	0.668***	-2.042***
Partner is inactive	0.513***	-1.034***
Has no partner	0.470*	-0.123
Has no living parents	0.071	-0.247
Has no children	-0.128	-0.253
Has no grandchildren	0.013	0.106
Age of the youngest grandchild	-0.003	-0.023
Aged 50–54 (ref.)		
55–59	-0.697***	1.118*
60–64	-0.159	0.352
65–68	1.051***	-4.995***
Age distance to retirement: More than 2 years below	-0.583**	0.990
At most 2 years below to at most 2 years above (ref.)		
More than 2 years above	0.393*	-3.099**
Number of functional health limitations	0.124***	-0.099
Wave 1 (ref.)		
Wave 2	0.923***	-0.464
Wave 4	2.077***	-2.681*
Wave 5	2.977***	-2.645*
Wave 6	3.842***	-2.945*
Wave 7	4.887***	-3.082
constant		38.995***
<i>n</i> (person-years)	25,064	53,676
( <i>n</i> persons)	(7,740)	(31,846)

\* $p < .05$ .\*\* $p < .01$ .\*\*\* $p < .001$ .

Source: SHARE Release 7.0.0. Waves 1, 2, 4, 5, 6 and 7. Sample: Individuals aged 50–68. Conditional logit (Leave the labour market and linear fixed-effects (Working hours) regression models (unbalanced panel) with robust standard errors clustered at the country level).

### 3.2.2 | Country contexts

In order to test our hypotheses whether the policy context moderates the linkage between caregiving and labour market participation, we calculated interaction terms between providing care and the three policy indicators. As we can see from the first block of coefficients in Table 3, cash-for-care expenses have an overall positive effect on

**TABLE 3** Fixed effects regressions of employment participation on caregiving in different elder and childcare policy contexts

	Men		Women	
	Labour market exit	Working hours	Labour market exit	Working hours
Cash-for-care	1.929*	0.991	2.330***	0.142
Upward	0.103	-0.079	-0.018	-0.135
Cash*Upward	0.074	-0.036	0.118	-0.398
Lateral	0.104	-0.126	0.189*	-0.709*
Cash*Lateral	0.066	-0.460	-0.039	-0.043
Care-in-kind	2.033	-11.721	2.580	-3.972
Upward	0.090	-0.087	0.028	-0.293
Kind*Upward	0.581	0.051	0.051	0.298
Lateral	0.150*	-0.220	0.179*	-0.765*
Kind*Lateral	-0.006	-0.403	-0.187	0.237
ECEC per child < 5	0.112	-1.28***	-0.18*	-0.319
Downward	0.520**	-0.479	0.180*	-0.525*
ECEC*Downward	-0.021	-0.058	0.062***	0.067
n (person-years)	12,276	11,747	12,788	26,329
	12,226	26,360	12,443	26,599
	26,613	26,329	26,599	26,100

\* $p < .05$ .\*\* $p < .01$ .\*\*\* $p < .001$ .

Source: SHARE Release 7.0.0. Waves 1, 2, 4, 5, 6 and 7; OECD (2017) (cash-for-care and care-in-kind per capita); Eurostat (2019) and OECD (2019) (ECEC). Sample: Individuals aged 50–68. Conditional logit (leave the labour market) and linear (Working hours) regression fixed-effects models (unbalanced panel) with robust standard errors clustered at the country level, controlling for GDP per capita and time-varying individuals level variables from Table 2. Separate models for each contextual factor and its interaction terms.

leaving the labour market: if the average expenditure on eldercare per citizen is increased by 1,000 USD, non-caregivers' risk of leaving the labour market increases by a factor of 10 ( $\exp(2.303)=10.27$ ) for women and by a factor of nine for men ( $\exp(1.933)=6.89$ ). This increase in risk is of a similar magnitude for caregivers (non-significant interaction terms). No significant effect of cash-for-care can be found on working hours.

Regarding the care-in-kind schemes (second block in Table 3), we find no significant effects on men's or women's labour market behaviour, despite large effect sizes. This is mainly due to the metric (measured per capita in 1000 USD). Generally, there is not as much variance across countries in per-capita care-in-kind spending (about 1,000 USD difference between Greece and Sweden, the lowest and highest spenders respectively), as compared to cash-for-care expenditure. With regard to formal childcare (ECEC) expenditure (third block in Table 3), the employment status of grandfathers appeared to be unaffected, while their working hours decrease by about 77 min ( $60*(1.276)$ ) with each 1,000 EUR increase. This was the case irrespective of whether they took on a caring role or not (no significant interaction terms). For grandmothers who did not provide grandchild care on a regular basis, higher expenditure on ECEC decreased the risk of exiting the labour market by about 20% ( $\exp(-0.181)$ ). However, grandmothers providing care on a regular basis did not benefit in the same way from childcare infrastructure. Contrary to our expectations (H3), grandmothers who provided regular care for their grandchild were more likely to leave the labour market with increasing expenditure on ECEC.

However, given the variety of welfare regime classifications and the number of different indicators proposed in the welfare literature, (see above) we also tested alternative indicators, as well as different welfare regime indicators, in order to check for the robustness of our results. All in all, these findings suggest that the patterns we found are relatively stable, despite some differences in these indicators and typologies (which do not always contain all countries).

All in all, these findings support our theoretical assumptions that cash-for-care policy schemes tend to discourage labour market participation by (potential) caregivers (H2), while we find no clear effects for care-in-kind policy schemes. Moreover, the effects seem to be specific to the type of care provided (upward or lateral) and the caregiver's gender. It seems as though regular care for grandchildren particularly increases the risk of employment reduction among grandparents. Expenditure on childcare services enable parents to combine employment and caregiving duties, and are linked to a lower risk of grandmaternal employment exit, as grandmothers are less required to support or enable their daughters' employment attachment. When turning to caregiving grandmothers, however, we find that – counter to our expectations – they are more likely to leave the labour market when a more comprehensive childcare infrastructure is available as compared to when there is fewer formal childcare available. This may be explained by empirical findings, which indicate that regular childcare provided by grandmothers is rare in such contexts (Glaser et al., 2013; Igel & Szydlik, 2011). If grandmothers chose to care for their grandchildren, this may rather be explained by grandmothers' desire to do so (Hank et al., 2018) or their ability to retire early due to pension eligibility (Möhring, 2014).

## 4 | DISCUSSION

This article contributes to the literature on the reconciliation of informal caregiving and employment participation. It asks how different forms of upward, lateral and downward caregiving impact on men's and women's likelihood of leaving the labour market, or reducing their working hours. As our results suggest, lateral and downward caregiving seems to exert a stronger influence on labour market participation than upward, intergenerational caregiving, and labour market exits seem to be more often a strategy than reducing working hours. Moreover, we found that grandfathers are more likely than grandmothers to exit employment when regularly looking after their grandchildren. Our suggestion is that this could have to do with our empirical design: since SHARE waves are biennial, we cannot determine which transition (to retirement or to grandchild care) happened first. It could thus be that our results reflect the situation of (recently) retired grandfathers who spend their time for grandchild care.

With regard to the societal context, we find that cash-for-care expenses decrease labour market participation for everyone, not only for caregivers specifically, whereas care-in-kind expenses seem to exert little effect. One reason behind this could be the crowding-in effect, meaning that strong services do not drive caregivers out of caregiving but instead divert their resources to other support forms (as has been suggested by Brandt et al., 2009). Higher expenditure on formal childcare decreases the risk of leaving the labour market more strongly for non-caregiving grandmothers than for grandmothers who regularly give care.

This study contributes to the literature in several ways. First, it extends the findings of previous literature regarding the linkage between informal care and employment (Backhaus & Barslund, 2019; Moussa, 2019) by differentiating between the types of caregiving within the kinship structure (Patterson & Margolis, 2019). We differentiate between upward, lateral and downward caregiving and show that the effect on caregivers' labour market participation differs substantially. Second, our study investigates how the welfare policy context plays into the linkage between caregiving and employment participation by examining the influence of three specific types of elder or childcare policies. Since neither the conditions for informal care nor for selection into/out of employment are the same in all countries, it is obvious that the linkage between the two types of activities is also framed by these circumstances.

Like many other studies, we will conclude this article by stating a number of limitations: most importantly, our findings might suffer from a selection problem in the sense that we can only analyse labour market exits and changes in working hours for those caregivers (and non-caregivers) who are still in the labour market above the age of 50. Especially for women, there are country-specific patterns of labour market participation among older cohorts (both with regard to employment status and retirement age, as well as working hours). However, even when – as part of our robustness checks – we controlled for the country- and year-specific labour market participation rate of this group, the results do not change. This indicates that the different degrees of selectivity in older women's labour market participation in the various contexts in Europe do not explain why some caregivers are more likely to retire than others. Furthermore, we are not able to differentiate between providing physical care (ADL) and household and practical support (IADL) within our longitudinal design, as these two types of support were not distinguished in all waves. Finally, our focus with regard to the institutional context was on childcare and eldercare policy. Pension policies, however, also matter in making the decision of when to leave the labour market (see the articles by Ebbinghaus (2021), as well as Möhring (2021), in this special issue). We are well aware of the fact that pension policies can create powerful incentives for labour market behaviour (pull factors). We are convinced, however, that it is similarly important to better understand how push factors, related to different forms of caregiving, impact on the decision to leave the labour market, or to reduce working hours at the end of one's working life.

Despite these limitations, we are confident that this article advances the discussion on the linkage between informal caregiving and employment by drawing attention to various forms of informal caregiving (upward, lateral and downward), analysing the gender dimension of these decisions, and by showing how the societal context moderates this linkage.

## ACKNOWLEDGEMENTS

The authors would like to thank two anonymous reviewers for their helpful feedback and advise, the editors of the special issue, as well as the participants of the Pension Research workshop that took place in Helsinki in February 2020. The work was supported by the German Research Foundation (DFG, project ID: STR1322/2-2) and by the European Union's Horizon 2020-EU.1.3.2. program (Project ID: 749443).

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**How to cite this article:** Bertogg A, Nazio T, Strauss S. Work–family balance in the second half of life: Caregivers' decisions regarding retirement and working time reduction in Europe. *Soc Policy Adm.* 2020;1–16. <https://doi.org/10.1111/spol.12662>