Unpaid caregiving and paid work over life-courses: Different pathways, diverging outcomes

CrossMark

Fiona Carmichael [a,] [*], Marco G. Ercolani [b]

[a] Department of Business and Labour Economics, Birmingham Business School, University of Birmingham, UK
[b] Department of Economics, Birmingham Business School, University of Birmingham, UK

A B S T R A C T

We investigate the extent to which people's earlier circumstances and experiences shape subsequent life-courses. We do this using UK longitudinal data to provide a dynamic analysis of employment and caregiving histories for 4339 people over 15−20 years between 1991 and 2010. We analyse these histories as sequences using optimal matching and cluster analysis to identify five distinct employment-caregiving pathways. Regression analysis shows that prior to embarking on these pathways, people are already differentiated by life-stage, gender and attitudes towards family and gender roles. Difference-in-differences estimation shows that some initial differences in income, subjective health and wellbeing widen over time, while others narrow. In particular, those following the most caregiving-intensive pathways not only end up poorer but also experience a relative decline in subjective health and well-being. These results confirm that earlier circumstances exert a strong influence on later life-courses consistent with pre-determination, persistence and path dependence.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

This paper investigates how employment and unpaid caregiving histories evolve over time as people age and considers the influence of gender and social attitudes. The policy context is population ageing which has created an imperative to extend working lives and is projected to lead to extra demands on health and caring services (HSCIC, 2014). At the same time there has been increased political emphasis on patient choice and the provision of care in the home. This combination is likely to increase the demand for both formal and informal care at home (Pickard et al., 2007; Wittenberg et al., 2011). Whether projected rises in demand for informal care will be met is difficult to know. The calculations in this paper suggest that unpaid caregiving already draws in 38.74 percent of the UK adult population at some point during their lives. As working lives extend, the time available to provide care is being constrained and pressures to combine caregiving and work are likely to increase. In this context, understanding how unpaid caregiving and paid work are interlinked is crucial.

However, much of the evidence on the conflicts and trade-offs between caregiving and paid work considers individual circumstances at a moment in time or over the very short-term (see Lilly et al., 2007 for a review). This is an omission since individual decisions about caregiving are unlikely to be made in a historical vacuum and may be made far in advance of a need arising. More generally, there is a need to explore the dynamic nature of relationships between employment and family context over life-courses (Moen and Sweet, 2004). The study by Moen et al. (1994) which draws on retrospective data for 293 women is one of the few to have examined how caregiving is embedded within individual life histories. Larger-scale empirical studies that have incorporated caregiving histories have mainly used lags or leads of caregiving, employment or family circumstances to explain an association at a point in time (Michaud et al., 2010; Carmichael et al., 2010; Heitmueller, 2007; Stern, 1995). This does not fully capture the ways in which caregiving and employment histories evolve together and are intertwined over life-courses. Overall the caregiving literature lacks rigorous, longitudinal studies that would enable us to understand how caregiving trajectories and trade-offs evolve over time.

This paper addresses these gaps using longitudinal data from 20 waves, i.e. years, of the combined British Household Panel Survey and follow-on Understanding Society (BHPS-US). The methodology involves four integrated stages. In the first stage we use sequence

* Corresponding author.
E-mail address: f.carmichael@bham.ac.uk (F. Carmichael).

analysis to map out respondents' observed histories over a period of 15−20 years. We then use optimal matching with cluster analysis to group individuals with similar histories. This allows us to create a typology of employment and caregiving histories without reducing them to single events (Brzinsky-Fay et al., 2006). The advantage of using sequence analysis over other methods, such as event history analysis, is that the method allows us to capture the sequential and multifaceted nature of life histories as entities. To our knowledge this is the first time that caregiving and employment histories have been analysed together in this way. In the third stage we use regression analysis to explore how gender, life-stage and social attitudes shape the pathways that people follow. In the final stage we use difference-in-differences estimation to examine whether any initial differences in income, health and wellbeing widen as people's caregiving and employment histories evolve. The results support pre-determination and persistence in caregiving and show that those who follow the most caregiving intensive pathways not only end up poorer but also with relatively lower subjective health and wellbeing.

The next section provides the framework for the analysis by summarising previous research on the role of social attitudes in the provision of care and the potential costs and possible longer term, cumulative effects of caregiving. The subsequent sections describe the data, the empirical methodology and the results. The final section summarises the main results and the limitations of the analysis.

2. Research context

At different stages of their lives people may take on a caregiving role because they feel obliged to provide care for a family member who becomes ill (Badgett and Folbre, 1999). This sense of responsibility or duty is tied to social attitudes, norms and expectations (Folbre, 1995) or binding systems of reciprocity (Daatland and Lowenstein, 2005). From this perspective, subjective norms, such as perceived social pressure to provide care, are predictors of behaviour (Ajzen, 2011). Research linking social norms and attitudes to female employment and the division of work within the home is consistent with these arguments (Farré and Vella, 2013; Michaud et al., 2010; Crompton et al., 2005).

A different view, consistent with orthodox neo-classical economics, is that caregiving decisions are determined by individual and household level cost-benefit calculations and efficiency considerations. These take into account any satisfaction (process utility) derived from caregiving (Brouwer et al., 1999) and the expected costs due to loss of income, ill-health and increased stress (Adelman et al., 2014). Efficiency at the household level additionally exploits comparative advantages in market work and unpaid household labour, including caregiving, to achieve gains from specialisation (Mincer and Polachek, 1974).

Income losses associated with the demands of caregiving are in the main due to conflicts at the work-family interface (Erickson et al., 2010) leading to substitution between care provision and labour supply, predominantly for more intensive carers. There is considerable evidence for such trade-offs particularly in Europe, the US and Canada and at the extensive margin of work including retirement (see Jacobs et al. 2014 for a recent summary). Such trade-offs will have dynamic effects in household decision-making due to obsolescence and deterioration of human capital. Caregivers could experience a reduction in their comparative advantage for market work reflected by the ratio of the market wage to marginal household productivity. A lower wage would also reduce the caregiver's threat point, lowering bargaining power within the household (Doss, 2011). This is important when, as discussed in Stern (1995), individual family members make decisions relative to

long-term care strategically. Carers as a group have also been found to suffer disproportionately from ill-health (Vitlic et al., 2015; ONS, 2013) and lower levels of wellbeing (Hirst, 2005; Marks et al., 2002). Lower wellbeing may stem from the loss of autonomy (Dolan et al., 2008; Brouwer et al. 1999) leading to greater emotional stress, physical strain and negative health effects (Schulz et al., 2012).

From a life-course perspective, these effects suggest predetermination and possible persistence in caregiving roles, perhaps underlying a "*de facto* incompatibility between family life and full-time careers" (Crompton and Birkelund, 2000:350). Comparative (dis)advantage for market work is also likely to be a missing variable in estimates of the relationship between employment and caregiving leading to selection bias. In the literature this endogeneity has been addressed using instrumental variables (He and McHenry, 2015; Heitmueller, 2007), simultaneous equations methods and panel data, either to model time invariant individual heterogeneity (Van Houtven et al., 2013), or the sequence of time (Michaud et al. 2010; Carmichael et al., 2010; Spiess and Schneider, 2003). Here we extend the latter approach using sequence data for 4339 individuals to explicitly model employment and caregiving pathways as interdependent entities and use difference-in-differences to explore outcomes.

3. Data and sample

Eighteen annual 'waves' of the BHPS were carried out from 1991 to 2008 and thereafter BHPS respondents became part of Wave 2 in the larger US survey. Both the BHPS and US are administered by the Institute for Social and Economic Research at the University of Essex, England and are designed as nationally representative surveys of the British population. Though smaller than other representative longitudinal surveys, such as the Census or the Labour Force Survey, they differ insofar as they are annual and are repeated for the same individuals to form a panel. In 1991, 10,264 respondents in 5511 households were surveyed. By 2008 the BHPS had expanded to reach 14,418 individuals in 8144 households. Each year steps were taken to minimise respondent attrition and the 18 year balanced panel contains 4098 individuals. In 2009 the BHPS was absorbed into the US surveys. After three years the balanced panel for the US surveys included 31,184 individuals.

In the BHPS-US unpaid, informal caregivers are identified as people who are looking after, helping, or providing a regular service for someone who is sick, disabled or elderly either in or outside their household. The surveys also ask questions on hours of care provided. Data on labour force status and hours of work identify people who are in full-time or part-time employment. Because decisions about childcare may have implications for future decisions about caregiving and employment we also identify individuals with young children living in the same household.

These data were analysed for a sub-sample of 4339 BHPS-US respondents for whom data were available for a minimum of 15 consecutive years between 1991 and 2010 (1909 males and 2430 females). This restriction reduces the sample size but ensures that the data were available for a sufficiently long period, one that constitutes a significant proportion of an individual's adult life. In addition, the restriction implies that initial observations for each individual were all made within a comparable relatively short time-frame (between 1991 and 1996, *i.e.* the first five waves of the BHPS). A wide age range, reflecting different age-cohorts within the sub-sample also allowed us to model life-stages. When first observed the youngest respondent was 16, the oldest was 85 and the mean age was 39.13.