

# The dynamics of informal care provision in the Australian household panel survey: Previous work characteristics and future care provision

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1 Introduction

2 Methodology

3 Empirical results

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## 3 Empirical results

- Informal care plays an important role in the welfare of sick, disabled and elderly people
  - 70 to 90 % of carers are family members in OECD countries (Fujisawa and Colombo 2009). Australia: 80 %
  - 12 % of the Australians provide assistance to those who need help because of disability or old age (ABS 2009)
- Demand for informal care to rise (population aging) ><  
Supply of informal care to decrease (Declining fertility rates, increases in female LFP rates, migration patterns)
- It is important to understand informal care provision determinants and dynamics

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- Informal care provision determinants: Two UK studies on care provision dynamics: (Mentzakis et al., 2009; Michaud et al., 2010).
- The impact of informal caregiving on caregivers' LFP: Negative impact in most studies; stronger for more intensive caregivers or residential caregivers.
- The impact of workplace flexibility on care provision decisions: positive (Bryan, 2012; Pavalko & Henderson, 2006) or no impact (Henz, 2006).
- Our contributions:
  - Evidence of informal care dynamics from Australia
  - More detailed measures of care intensity and previous work status
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- The long-term care literature: interaction between siblings who make decisions about long-term care for their elderly parents.
- The costs associated with changing care arrangements: positive state-dependent
- Human capital accumulation associated with providing care: positive state-dependent
- Labour market human capital depreciation associated with providing care: positive state-dependent
- The existence of a “burnout” effect: negative state-dependent

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$$C_{ijt}^* = X_{ijt}\beta_{X_j} + \gamma_j C_{ijt-1} + L_{ijt-1}\beta_{L_j} + \varepsilon_{ijt} \quad (1)$$

$C_{ijt}^*$   $\equiv$  care status ( $J = 3$ ),  $X_{ijt}$   $\equiv$  individual observed characteristics ;  
 $L_{ijt-1}$   $\equiv$  previous labour market states;  $\varepsilon_{ijt}$   $\equiv$  time-variant  
 unobserved individual effects and  $\varepsilon_{ijt} \equiv \alpha_{ij} + u_{ijt}$ .

- Use Wooldridge (2005) method to deal with initial conditions problem:

$$\alpha_{ij} = \varphi_{j0} + C_{ij1}\varphi_{j1} + L_{ij1}\varphi_{j2} + \bar{Z}_{ij}\varphi_{j3} + \eta_{ij} \quad (2)$$

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- Random effect Multinomial Logit (MNL) model to estimate individual choices to provide informal care (Non-carer as the base group)
- Estimated via a maximum simulated likelihood (MSL) method using 50 Halton draws for each individual
- Two alternative outcomes: Resident/non-resident or main/secondary caregivers
- Two specifications: With or without correlation between errors in two care outcome equations.
- Three alternative models: previous labour market statuses (Model 1); work security and flexibility perceptions (Model 2); and overall work satisfaction perceptions (Model 3).

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- **Data:** Waves 5 to 11 (2005 to 2011) of the Household Income and Labour Dynamics in Australia (HILDA) survey
- **Sample:** a balanced panel sample of individuals aged between 24 – 64, excluding individuals at school or FT study or with missing information -> 3,846 unique individuals, 54 % female
- **Variables included:** age, education, native, marital status, health, non-labour income, home ownership, number of HH members at various age cohorts, the health status of potential care recipients, local unemployment rates, states, urban, and year dummies
- Four labour market states (FT, PT, self-employment and economic inactivity) and three indicators of job security, flexibility and satisfaction

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Table 1 : Who cares and who is cared for

	Resident			Non-resident			Resident and non-resident		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Caregiver: % Yes	5.0	3.5	4.2	5.2	2.8	4.0	9.9	6.3	8.1
Main caregiver: % Yes	85.3	61.9	75.8	37.6	24.9	33.3	58.6	43.4	52.7
Who is cared for: %									
Spouse/partner	34.5	41.9	37.5	0.5	0.2	0.4	14.0	19.7	16.2
Parents	24.4	29.0	26.3	76.7	76.1	76.5	49.9	52.8	51.0
Children	38.1	25.9	33.1	4.5	4.5	4.5	24.8	18.1	22.2
Others	3.0	3.2	3.1	18.4	19.3	18.7	11.3	9.4	10.6

Table 2 : Caregiving trajectories

Wave t	Wave t+1					
	Female			Male		
	Non carer	Residential	Non-residential	Non carer	Residential	Non-residential
Non carer	95.5	1.7	2.8	96.7	1.4	2.0
Residential	32.3	65.4	2.3	38.5	59.8	1.7
Non-residential	50.2	2.0	47.8	65.0	1.9	33.1
Total	90.1	4.7	5.2	93.7	3.5	2.8

Table 3 : Caregiving dynamics - Model 1 with employment status

	Female		Male	
	Resident	Non-resident	Resident	Non-resident
Resident care last year	1.91***	0.58	1.51***	0.04
Non-resident care last year	0.40	1.27***	0.78	1.19***
Resident care at t = 1	4.81***	0.14	5.79***	1.34**
Non-resident care at t=1	0.71	2.65***	2.10***	2.57***
Work full time last year	-1.17***	-0.51**	-0.97**	0.01
Work part time last year	-0.21	-0.19	-1.06**	0.70*
Self-employed last year	-0.08	-0.37	-1.33**	0.27
Work full time at t=1	-0.47	0.27	-0.31	-0.24
Work part time at t=1	-0.66*	0.20	-1.16	-1.43**
Self-employed at t=1	-0.69	-0.39	-0.46	-0.88

**Table 4 :** Caregiving dynamics - Model 2 with work security and flexibility indicators

	Female		Male	
	Resident	Non-resident	Resident	Non-resident
Resident care last year	1.96***	0.60	1.48***	0.15
Non-resident care last year	0.37	1.23***	0.52	1.34***
Resident care at t = 1	4.66***	-0.01	5.89***	1.40**
Non-resident care at t=1	0.15	2.71***	2.36***	2.44***
Job security index last year	-0.05	-0.01	0.11	0.03
Work and life job sat. last year	0.07	-0.00	0.01	-0.01
Unemployed last year	0.37	0.29	0.67	-0.39
Job security index at t=1	0.09	-0.03	-0.02	-0.12**
Work and life job sat. at t=1	-0.04	-0.01	-0.03	0.02
Unemployed at t=1	0.33	-0.09	0.89	0.54

**Table 5 :** Caregiving dynamics - Model 3 with overall work satisfaction indicators

	Female		Male	
	Resident	Non-resident	Resident	Non-resident
Resident care last year	1.96***	0.59	1.49***	0.13
Non-resident care last year	0.36	1.23***	0.50	1.34***
Resident care at t = 1	4.66***	-0.01	5.82***	1.41**
Non-resident care at t=1	0.12	2.72***	2.31***	2.42***
Overall work satisfaction last year	-0.08	0.01	-0.02	0.02
Unemployed last year	0.36	0.28	0.73*	-0.35
Overall work satisfaction at t=1	0.05	-0.03	-0.02	-0.05
Unemployed at t=1	0.31	-0.08	0.82	0.46

**Table 6 :** Caregiving intensity dynamics - Model 1 with employment status

	Female		Male	
	Main	Secondary	Main	Secondary
Main care last year	1.53***	0.79***	1.85***	0.42
Secondary care last year	1.23***	1.57***	0.76*	1.50***
Main care at t = 1	3.80***	1.99***	3.99***	2.41***
Secondary care at t=1	2.13***	2.44***	1.60***	2.85***
Work full time last year	-0.86***	-0.48**	-1.21***	0.26
Work part time last year	-0.08	-0.25	-1.13**	0.81**
Self-employed last year	-0.02	-0.39	-1.64***	0.55
Work full time at t=1	-0.08	0.07	-0.40	-0.22
Work part time at t=1	-0.48*	0.08	-0.30	-1.75***
Self-employed at t=1	-0.33	-0.29	-0.32	-1.04**

## Summary

- The results provide strong evidence of positive state-dependence in all care provision states: in both the short and medium-term.
- The persistence in care provision appears to be stronger for more intensive care types (i.e. resident care or main care).
- The impact of previous employment states on the current care decisions varies by type of previous work, type of current care, and gender
  - For females, only working FT reduces their current probability of providing any type of care (either defined by residency status or intensity).
  - For males, working on any basis last year statistically significantly reduces their current probability of providing more intensive care (i.e. resident or main care) only.

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