Joint Retirement In Europe
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research topic of significant potential policy relevance

LC supply typically modeled as individual decision; main focus: financial incentives & health status

conceivable: spouses shape retirement decision through

- common shocks, common incentives
- household production
- spousal care provision
- common preferences; leisure complementarities, etc.

spill over: spousal retirement may induce retirement

either: exploit policy rules (+ changes) that hit spouses differentially

or: structural modeling of dependence in spousal retirement decisions
ambitious
- uses two micro data sets SHARE and ELSA, covering many countries (targeted at health and retirement of 50+ pop)
- applies novel estimation strategy (H&DP 2014) for dependent durations w/ joint failure; (semi) structural

nice economics
- structural approach has potential to test competing theories

novelty
- complementary evidence to Banks et al (2010) and Hospido/Zamarro (2014), and H&DP (2014)

core findings
- SHARE: no utility cross-dependence; but hampered by limited panel aspect
- ELSA: evidence depends on whether correlation in random terms is allowed for
Recommendations

- clearer motivation why using those data sets
- clearer discussion of what is / is not available in the data
- cleaner write-up incl notation (e.g. multiple $\beta$’s and $\theta$’s . . .)
- closer tying in of econometric estimates and economic interpretation
- robustness checks wrt specification and functional form
- move the paper away from its twin sibling H&DP (2014)
<table>
<thead>
<tr>
<th>$\sigma^*$ / $\varphi$</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>1</td>
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<td>14</td>
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<tr>
<td>2006</td>
<td>4</td>
<td>11</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>2007</td>
<td>2</td>
<td>0</td>
<td>10</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>2008</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>7</td>
<td>8</td>
<td>3</td>
<td>35</td>
</tr>
<tr>
<td>2009</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>11</td>
<td>1</td>
<td>34</td>
</tr>
<tr>
<td>2010</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>10</td>
<td>7</td>
<td>7</td>
<td>4</td>
<td>32</td>
</tr>
<tr>
<td>2011</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>6</td>
<td>33</td>
</tr>
</tbody>
</table>

$\sigma^*$: husband, $\varphi$: wife

- What percentage is imputed in this data?
- What type of errors (recall?) may affect the measurements?
Sample Definition and Specification

- sample size is limited; yet: is it possible to
  - use marital history information to select stable marriages?
  - condition on hours worked at baseline? (exc part-time)
- control for lots of other observables (if available)
  - objective health
  - education; income/wealth
  - industry; occupation; job characteristics
  - having children/grandchildren
not entirely straightforward to understand the link between four different submodels in the auxiliary model (AM) and the structural model (SM)

even though AM can be misspecified, usually chosen to capture structure of covariation in the data — any comments on this?

what are the potential consequences of misspecification of AM for inference and interpretation of SM parameters? robustness?

in addition, choice of AM possibly important for efficiency goodness of fit?
On $\delta$ and $\tau$

- $\delta$ captures dependence of durations in post-retirement utility after spouse retires

$$\ln(\delta) + \theta_1 \ln(t) + \theta_2 x$$

before spouse retires

$$\theta_1 \ln(t) + \theta_2 x$$

(rewritten in log-form)

- leisure not an argument of the utility function; so $\delta$ captures any cross effect during retirement
- interpretation: leisure complementarity?
- have $\delta$ depend on observables / interact with $x$’s?

- $\tau$ captures correlation in unobserved rd utilities

- statistically $\approx 0$ in all models, yet influential (ELSA: $\delta \to 1$)
- possibility of testing for the collective model (SWF/HUF)

$$\max_{t_1, t_2} c U^1(t_1, t_2, x_1, K_1) + U^2(t_1, t_2, x_2, K_2)$$

v Nash bg model

$$\max_{t_1, t_2} [U^1(t_1, t_2, x_1, K_1) - A_1] \times [U^2(t_1, t_2, x_2, K_2) - A_2]$$

- sensitivity wrt modeling $A_i$?
  “set at 0.6 times utility they would have obtained if” $t_j \to \infty$?

- allow for bg weights (high earner ‘forces’ low earner to accommodate his/her own retirement choices)?

- possibility to estimate $\rho$ from survey data?
Some Literature: Effects of Induced Retirement
Nonstructural Papers

Zweimuller et al 1996 change in elig age of ♀ induces ret of ♂
Baker 2002 ♀ reaching elig age decreases ♂ LFP rate by 6-7 pp
Banks et al 2010 ♀ reaching elig age increases ♂ prob to retire by 14-20 pp
Stancanelli 2012 pos effect of ret on spousal hours worked (both ♂ and ♀)
Hospido Zamarro 2014 induced ret of ♂ increases ♀ prob to retire by 17 pp
Bloemen et al 2015 ER window for ♂ increases ♀ prob to retire by 25 pp

♀: husband, ♂: wife

- how might your estimates translate, what can be compared?
- however, smooth fn of time rather than identif at discontinuity
Table 9: Simultaneous Duration (SHARE)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>δ</td>
<td>1.08 (0.18)</td>
<td>1.01 (0.29)</td>
<td>1.08 (0.51)</td>
<td>1.00 (0.02)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>θ₁</td>
<td>6.44 (0.45) 5.84 (0.24)</td>
<td>6.53 (2.40) 5.84 (0.32)</td>
<td>6.55 (1.90) 5.95 (0.87)</td>
<td>6.73 (0.36) 5.95 (0.78)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Age Diff.</td>
<td>-1.58 ** (0.57) 0.31 (0.14)</td>
<td>-1.50 ** (0.80) 0.30 (0.22)</td>
<td>-1.76 ** (0.42) 0.34 † (0.19)</td>
<td>-1.52 ** (0.36) 0.34 (0.44)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ V.G. Health</td>
<td></td>
<td></td>
<td>-0.16 (0.23) 0.45 ** (0.15)</td>
<td>-0.13 (0.22) 0.45 * (0.18)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ Fair Health</td>
<td></td>
<td></td>
<td>0.21 (0.27) -0.57 ** (0.21)</td>
<td>0.06 (0.33) -0.48 * (0.22)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country Controls</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>τ</td>
<td>0.81 (2.58)</td>
<td>0.77 (1.00)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>N</td>
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<td>4083</td>
<td>3715</td>
<td>3715</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Function Value</td>
<td>6.09</td>
<td>1.68</td>
<td>7.42</td>
<td>2.02</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Significance levels: †: 10% *: 5% **: 1%. Significance levels are not displayed for θ₁ or δ. $\rho = 0.004$ and $R = 10$. 
Table 10: Simultaneous Duration (ELSA)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wife Coef. (Std. Err.)</th>
<th>Husb. Coef. (Std. Err.)</th>
<th>Wife Coef. (Std. Err.)</th>
<th>Husb. Coef. (Std. Err.)</th>
<th>Wife Coef. (Std. Err.)</th>
<th>Husb. Coef. (Std. Err.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>δ</td>
<td>1.46 (0.12)</td>
<td>1.03 (0.32)</td>
<td>1.36 (0.18)</td>
<td>1.01 (0.13)</td>
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<tr>
<td>θ₁</td>
<td>2.82 (0.17)</td>
<td>2.85 (0.11)</td>
<td>2.94 (0.34)</td>
<td>3.18 (1.11)</td>
<td>3.01 (0.36)</td>
<td>3.29 (0.27)</td>
</tr>
<tr>
<td>Age Diff.</td>
<td>-0.74 ** (0.26)</td>
<td>0.16 (0.16)</td>
<td>-0.56 ** (0.26)</td>
<td>0.01 (0.20)</td>
<td>-0.56 ** (0.42)</td>
<td>0.12 (0.19)</td>
</tr>
<tr>
<td>≥ V.G. Health</td>
<td></td>
<td></td>
<td>0.16 (0.24)</td>
<td>0.05 (0.20)</td>
<td>0.12 (0.21)</td>
<td>0.11 (0.20)</td>
</tr>
<tr>
<td>≤ Fair Health</td>
<td></td>
<td></td>
<td>0.29 (0.24)</td>
<td>0.14 (0.34)</td>
<td>0.22 (0.36)</td>
<td>0.17 (0.27)</td>
</tr>
<tr>
<td>τ</td>
<td>2.26 (5.13)</td>
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<td></td>
<td></td>
<td>2.81 (2.56)</td>
<td></td>
</tr>
<tr>
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<td>1110</td>
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</tr>
<tr>
<td>Function Value</td>
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<td>0.01</td>
<td>3.72</td>
<td>0.11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significance levels: †: 10%  *: 5%  **: 1%. Significance levels are not displayed for θ₁ or δ. ρ = 0.004 and R = 10.