

HEALTH STATUS AND RETIREMENT DECISIONS FOR OLDER EUROPEAN COUPLES

EPUNet 2006- Barcelona, 9th. May 2006

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I. Goals

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I. GOALS

Find answers to:

- Is **joint retirement** common in European labour markets?
- If so, which are its determinants? I.e., which are the characteristics of the couples that tend to retire jointly? In particular, **role of health status** → Care-giving
- Framework: the **eight waves** of the ECHP
 - Also considering **dynamics**

Stylised Facts

- Males leave labour force earlier
- Recently, female labour force participation sharply increase



More joint labour force decisions



Increasing interest in how labour decisions of couples
influence each other

- Effect of unemployment of one spouse on decisions of the other
- Effect of retirement of one spouse on decisions of the other

Empirical evidence

- US → evidence of joint retirement: 30% to 40% of all couples retire less than a year apart

Hurd (1990)

Gustman and Steinmeier (1994)

Blau (1998)

- For Europe → little evidence, except for Germany

Blau & Riphahn (1999)

Datta Gupta et al. (2004)

This paper:

- Analyses transitions between household states
(multinomial logit or logit analysis)
- Uses a panel of European data
- Controls for
 - Personal characteristics → **health status**
 - Household characteristics
 - Country specific variables

II. DATA

- European Community Panel Survey: Extension to 8 Waves (1994-2001)
- Detailed and homogenised information about household income and living conditions for 12 European countries:

Germany

Denmark

Belgium

Luxembourg

France

UK

Ireland

Italy

Greece

Spain

Portugal

Netherlands

Austria

Finland

Sweden

III. EMPIRICAL SPECIFICATION

- Multiple state model (it can be derived from a household utility optimisation problem)
- Possible states

0 = both spouses participating

1 = husband participating, wife not participating

2 = husband not participating, wife participating

3 = both not participating

MATRIX 1.- Possible transitions between household states

Origin State	Destination State			
	P.P	P.NP	NP.P	NP.NP
P.P	----	$\pi_{12}(X_i\beta_{12})$	$\pi_{13}(X_i\beta_{13})$	$\pi_{14}(X_i\beta_{14})$
P.NP	Not considered	----	Not considered	$\pi_{24}(X_i\beta_{24})$
NP.P	Not considered	Not considered	----	$\pi_{34}(X_i\beta_{34})$
NP.NP	Not considered	Not considered	Not considered	----

Keys: P = Participation; NP = Non Participation. First letter refers to husband, second to wife.

Table 2A. Sample transitions between states. All waves and countries

	Employed	Unemployed	Non participating	Total
No Trans	43,103 92.03	2,614 59.61	133,399 94.25	179,116 92.92
E to U		1,063 24.24		1,063 0.55
U to NP			1,499 1.06	1,499 0.78
E to NP			6,642 4.69	6,642 3.45
Total	46,836	4,385	141,54	192,761

Table 2B. Sample transitions between household states[Retirement assumed to be absorbing]

From	To	Both in	Husband in / Wife out	Husb. Out / wife in	Both out
Both in		1035 (74.3%)	175 (12.6%)	117 (8.4%)	66 (4.74%)
Husb. In / wife out		n.c.	1861 (78.4%)	nc	514 (21.64%)
Husb. Out / wife in		n.c.	n.c.	575 (75.9%)	183 (24.1%)
Both out		n.c.	n.c.	n.c.	n.c

Notes: n.c. stands for not considered. Sample: Husband Aged 55+ Wife 50+; EU12 countries except the Netherlands

Table 3. Probability of retirement unconditional and conditional on spouse's retirement and health status

	Uncond.	Wife poor health	Wife poor health Retired between Dec 93-Dec 94	Husband poor health	Husband poor health Retired between Dec 93-Dec 94
Husband	18.41	20.97	24.36	27.95	/
Wife	19.71	22.53	/	21.76	41.30

Estimation procedure of transition probabilities

Model without unobservable heterogeneity

+

transition intensities of Weibull form

+

ignoring transition time

(only destination state)

⇓

estimation of **three** separated equations

Future: Control for unobserved heterogeneity

In particular, 3 equations are:

1. Origin state in first period: both spouses in the labour force
Multinomial logit on the second period.

States: both participating, husband participating and wife not, wife participating and husband not, both out of the labour force

2. Origin state in first period: husband participating, wife not
Logit on the second period

States: husband in the labour force and the wife out and both retired.

3. Origin state in first period: wife participating, husband not
Logit on the second period

States: husband out of the labour force and the wife in and both retired.

IV.RESULTS

Individual:

- The more the household depends on the male for survival the smaller the probability of retirement is
- Self-employment reduces the probability of retiring
- Highly educated individuals stay in the labour market for longer periods.
- Age peak effect at 60 and 65.
- Health variables very relevant especially for males
- Strong differences among countries accounted for by the differences in regulation, especially for males. For females, the important behavioural differences across countries (essentially the difference North vs. South) are not well explained by the differences in regulation.

Couples:

1. Demographic

- Age:
 - Strong positive effect, especially for women, when other member already retired
 - Cross-couple effects important especially on joint transitions
- Education:
 - Own education negative effect
 - Asymmetric cross-couple education effect: positive for females, negative for males
- Living arrangements and household size
 - The more the household depends on the member of the couple the less the probability of retiring

2. Health status

- Poor health → strong positive effect on own transitions
(males)
- Cross-spouse effects:
 - When one member is retired: small but for the case in which the husband is retired while the wife is working → negative effect
 - Poor health of the husband increases the probability of both retiring.
 - Negligible effect of women's health.
 - Assortative mating or complementarities in leisure.

3. Labour force characteristics

- Experience → positive effect
- Self-employment → negative effect
- Part-time jobs → positive effect

- Unemployed at the first period → positive effect (reinforced by age); absence of an added worker effect.

4. Income variables

- Negative effect on the probability of retirement
- Cross-spouse effects asymmetric:
 - Husband income → (+) effect in the wife retiring
 - Wife income → (-) effect in the husband retiring
- Non work income negative effect on retirement

See some results...

IV. CONCLUSIONS

- Cross-age effects
 - Evidence against added worker effect
 - Male health status especially relevant in joint retirement
 - Asymmetric work experience and income effects
 - Complementarities in leisure or correlation on the unobservables.
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- **Extensions:**

Policy implications of Social Security reforms (wage profiles and simulation of pensions)

Table 4. Marginal Effect in Husband Retiring when the wife is already out of the labour force

	Prob.	Effect (%)
Reference	0.072	
Husband Age = 60	0.233	222
Husband Age = 65	0.554	664
Wife Age =60	0.079	10
Wife Age =65	0.080	10
Husband Chronic Condition	0.099	37
Husband in-patient at hospital	0.160	121
Husband visiting doctor >=5	0.084	16
Previous Three	0.282	289
Wife Chronic Condition	0.082	13
Wife in-patient at hospital	0.102	41
H. work history started at 28	0.072	-1
Husband Unemployed at t ₀	0.056	-23
H. Unemployed and Age 62	0.345	376
Husband Higher Education	0.072	-1
Wife Higher Education	0.036	-51
Husband Part Time	0.127	75
Husband Public Sector	0.092	27
Husband Self-employed	0.048	-33
Household size = 4	0.045	-37
Not independent	0.346	378
H. relative income = 75%	0.059	-18
H. relative income = 25%	0.088	22
H. relative income = 0%	0.108	48
Couple relative non-work income = 10%	0.108	48
Wife receiving invalidity income	0.063	-13
Denmark	0.033	-54
Belgium	0.047	-35
France	0.141	95
UK	0.046	-37
Ireland	0.034	-53
Italy	0.103	42
Greece	0.080	10
Spain	0.052	-28
Portugal	0.046	-37

Note: the reference couple has the following characteristics: husband 55 years old and wife 52, none of them with higher education, none unemployed in the initial period, both starting their working lives at 18, with no part-time job, none working in the public sector, none self-employed, living independently and without any other family member. The shares of the household income for the reference couple are : 25% wife income, 50% husband income and no capital income.

Table 5. Marginal Effect in Wife Retiring when the husband is already out of the labour force

	Prob.	Effect (%)
Reference	0.023	
Husband Age = 60	0.034	49
Husband Age = 65	0.043	90
Wife Age =60	0.281	1138
Wife Age =65	0.434	1812
Husband Chronic Condition	0.017	-24
Husband in-patient at hospital	0.040	78
Wife Chronic Condition	0.044	95
Wife in-patient at hospital	0.092	307
Wife visiting doctor >=5	0.018	-21
Previous Three	0.096	324
Wife work history started at 28	0.019	-17
Wife Unemployed at t ₀	0.017	-25
Wife Unemployed and aged 62	0.076	235
Husband Higher Education	0.028	24
Wife Higher Education	0.020	-13
Wife Part Time	0.032	39
Wife Public Sector	0.016	-28
Wife Self-employed	0.015	-33
Household size = 4	0.019	-18
Not independent	0.083	268
W. relative income = 75%	0.013	-43
W. relative income = 50%	0.040	74
W. relative income = 0%	0.068	200
Couple relative non-work income = 10%	0.025	8
Husband receiving invalidity income	0.037	62
Denmark	0.011	-53
Belgium	0.011	-51
France	0.034	48
UK	0.040	77
Ireland	0.006	-73
Italy	0.038	68
Greece	0.034	52
Spain	0.024	4
Portugal	0.011	-50

Note: the reference couple has the following characteristics: husband 55 years old and wife 52, none of them with higher education, none unemployed in the initial period, both starting their working lives at 18, with no part-time job, none working in the public sector, none self-employed, living independently and without any other family member. The shares of the household income for the reference couple are : 25% wife income, 50% husband income and no capital income.

Table 6. Marginal effect for transitions from both working

	Wife Retiring		Husband Retiring		Both Retiring		Both working	
	Prob.	Effect (%)	Prob.	Effect (%)	Prob.	Effect (%)	Prob.	Effect (%)
Reference	0.0377		0.0087		0.0014		0.9522	
Husband Age = 60	0.0478	26.7	0.0381	340.2	0.0042	197.4	0.9099	-4.4
Husband Age = 65	0.0457	21.1	0.1880	2070.1	0.0157	1020.6	0.7506	-21.2
Wife Age =60	0.2430	544.3	0.0097	12.3	0.0425	2929.3	0.7048	-26.0
Wife Age =65	0.2478	557.2	0.0155	78.6	0.0126	800.6	0.7241	-24.0
Husband 65 and Wife 60	0.2942	680.2	0.2112	2337.9	0.4765	33847.1	0.0181	-98.1
Husband Chronic Condition	0.0422	11.9	0.0324	273.6	0.0065	362.3	0.9189	-3.5
Husband in-patient at hospital	0.0477	26.5	0.0193	123.0	0.0087	517.7	0.9243	-2.9
Husband visiting doctor >=5	0.0289	-23.3	0.0285	229.0	0.0042	200.0	0.9384	-1.5
Previous Three	0.0483	28.0	0.1278	1375.0	0.0549	3813.8	0.7690	-19.2
Wife Chronic Condition	0.0781	107.2	0.0164	88.7	0.0015	8.0	0.9040	-5.1
Wife in-patient at hospital	0.0236	-37.4	0.0055	-37.1	0.0036	159.7	0.9673	1.6
Wife visiting doctor >=5	0.0352	-6.7	0.0032	-62.5	0.0004	-71.6	0.9612	0.9
Previous Three	0.0598	58.6	0.0081	-6.1	0.0008	-45.9	0.9313	-2.2
Both Chronic condition	0.0375	-0.4	0.0171	96.8	0.0069	388.6	0.9385	-1.4
H. work history started at 28	0.0361	-4.3	0.0123	42.5	0.0070	401.1	0.9445	-0.8
Wife work history started at 28	0.0398	5.7	0.0165	90.4	0.0052	269.2	0.9385	-1.4
Husband Unemployed at t ₀	0.0485	28.6	0.0154	77.7	0.0039	179.8	0.9322	-2.1
Wife Unemployed at t ₀	0.1045	177.1	0.0084	-3.1	0.0015	9.3	0.8856	-7.0
Both Unemployed	0.1343	256.2	0.0149	72.1	0.0043	205.8	0.8465	-11.1
Husband Higher Education	0.0444	17.7	0.0050	-42.3	0.0009	-38.1	0.9497	-0.3
Wife Higher Education	0.0259	-31.3	0.0066	-24.4	0.0022	57.4	0.9653	1.4
Both Higher Education	0.0305	-19.2	0.0038	-56.4	0.0014	-2.5	0.9644	1.3
Husband Part Time	0.0238	-36.8	0.0135	56.3	0.0013	-9.7	0.9614	1.0
Wife Part Time	0.0884	134.4	0.0114	31.5	0.0023	61.7	0.8979	-5.7
Both Part Time	0.0558	48.1	0.0178	105.6	0.0020	46.0	0.9243	-2.9
Husband Public Sector	0.0227	-39.7	0.0168	93.7	0.0017	22.3	0.9588	0.7
Wife Public Sector	0.0324	-14.0	0.0126	45.9	0.0015	7.8	0.9534	0.1
Any Self-employed	0.0252	-33.2	0.0071	-18.5	0.0005	-66.5	0.9673	1.6
Household Size = 4	0.0370	-2.0	0.0076	-12.5	0.0004	-72.5	0.9551	0.3
Not Independent	0.0441	17.1	0.0146	68.2	0.0699	4882.9	0.8713	-8.5
H. relative income = 75%	0.0453	20.1	0.0076	-12.4	0.0005	-66.4	0.9467	-0.6
H. relative income = 25%	0.0314	-16.7	0.0099	14.1	0.0042	198.0	0.9545	0.2
H. relative income = 0%	0.0261	-30.7	0.0113	30.2	0.0125	787.8	0.9501	-0.2
W. relative income = 75%	0.0067	-82.2	0.0051	-41.5	0.0002	-85.2	0.9880	3.8
W. relative income = 50%	0.0159	-57.9	0.0066	-23.5	0.0005	-61.5	0.9769	2.6
W. relative income = 0%	0.0895	137.3	0.0113	30.7	0.0036	159.7	0.8956	-6.0
Relative non-work income = 10%	0.0353	-6.4	0.0074	-14.2	0.0010	-31.6	0.9563	0.4
Denmark	0.0162	-57.1	0.0095	9.2	0.0014	-1.2	0.9730	2.2
Belgium	0.0301	-20.2	0.0200	130.5	0.0009	-39.4	0.9491	-0.3
France	0.0090	-76.2	0.0506	483.4	0.0155	1002.2	0.9250	-2.9
UK	0.0427	13.2	0.0123	41.4	0.0038	173.8	0.9412	-1.2
Ireland	0.1297	244.1	0.0063	-27.1	0.0056	301.7	0.8583	-9.9
Italy	0.1364	261.9	0.0364	320.3	0.0130	823.0	0.8142	-14.5
Greece	0.0848	124.8	0.0158	81.9	0.0053	274.6	0.8942	-6.1
Spain	0.0737	95.4	0.0053	-39.0	0.0072	411.8	0.9138	-4.0
Portugal	0.0299	-20.6	0.0091	4.6	0.0010	-25.6	0.9599	0.8

Note: the reference couple has the following characteristics: husband 55 years old and wife 52, none of them with higher education, none unemployed in the initial period, both starting their working lives at 18, with no part-time job, none working in the public sector, none self-employed, living independently and without any other family member. The shares of the household income for the reference couple are : 25% wife income, 50% husband income and no capital income.