Partners' Leisure Time Truly Together Upon Retirement

Elena Stancanelli* and Arthur Van Soest**

May 2015

 * Paris School of Economics, CNRS, IZA

**Tilburg University, Netspar, IZA

The motivation

- **Most OECD governments set to increase female labor supply and provide incentives for male and female workers to stay on the job for longer (to compensate for increasing budgetary pressure and deficietary pension funds)**

- **Earlier studies indicate that spouses tend to retire from work at a close time and this mainly because of externalities in leisure (Hurd, 1990; Gustman and Steinmeier, JOLE 2000 and Econometrica).**

- **About 80% of the labor force are dual-earners in OECD countries and most older workers are married.**

The motivation

- Because on average the wife is two years younger than the husband in most OECD countries, to retire at a close time together: the wife may retire a little earlier than she would, had she been single, or the husband may stay on the job a little longer than he would, had he been single. The first scenario may not please policy makers who would prefer the wife to work longer!

- Studies of joint retirement argued that leisure complementarities are important but did not actually consider the extent to which partners spend leisure time together upon retirement.

- Here we set to investigate whether partners do spend more leisure time together upon retirement, using French time use data , to conclude that leisure complementarities are unlikely to provide the main rational for joint retirement of partners and thus also cast doubts on the latter.

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The motivation

- **Studies on actual leisure hours of partners are scant and they have not investigated leisure together at retirement**
- **Earlier literature focused on dual-earners:**
- **Hamermesh (2002), partners spend leisure time synchronously and adapt their work schedules in such a way to be able to do so.**
- **Hallberg (2003), "actively" chosen joint leisure is actually only a small proportion of synchronized leisure (matching singles to individuals in a couple).**
- **From the perspective of the individual time allocation decision, Daiji Kawaguchi, Jungmin Lee and Daniel Hamermesh (2013) and Jungmin Lee, Daiji Kawaguchi and Daniel Hamermesh (2012) provided compelling evidence of significant increases in individual leisure hours upon legislated changes that reduced working days in Korea and Japan.**

This paper

- **Studies of joint retirement did not consider the extent to which partners actually spend their leisure time together.**

- **Because individuals with stronger preferences for leisure may tend to retire earlier, we endogenize retirement in our model of the effect of retirement on leisure hours of partners.**

- **We use the discontinuity in retirement at age 60 (legal early retirement age for many workers) to identify the causal effect of retirement on hours of leisure**

Overview of our findings

- **The own retirement probability increases significantly for spouses aged 60 and above, which supports our identification strategy.**

- **Own Retirement increases the hours each partner allocates to leisure activities done separately from the partner.**

- **Only retirement of the wife increases significantly leisure hours together.**

- **The positive effect of partners' retirement on the hours of leisure spent together is smaller or at least NOT LARGER than that on separate leisure or house work hours of partners.**

- **This suggests that leisure complementarities are unlikely to drive retirement together of partners.**

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Joint leisure at retirement?

Joint leisure at retirement?

The Data

- **The French Time Use Survey 1998-1999**
- **French time use survey run once every 12 years! The new one samples very few older couples so can t use it.**
- **Response rate to survey about 70 per cent and >95% of participants fill in time diary**
- **Diary collected for both partners the same day (chosen by the interviewer)**
- **Retirement is self-assessed on the interview day: reported to be retirees or early-retirees at the interview date (standard LFS Q)**
- **Our measure of leisure includes 46 activities ranging from eating out, watching television, computer games, reading, going to the movie, socializing, doing sports, etc.**
- **We know the day, month, year of the interview and the month and year of birth.**

The data: Sample selection

- **Selection of individuals in a couple**
- **both Age 50-70 (bounds of ten years on each side of age 60)**
- **Drop atypical day diaries: marriage; funeral; sick day; vacation day; other festivity day**
- **Sample: 1043 couples**
- **We use four different definition of leisure separate and together by exploiting the timing of activity information and also the questions on « where » and « with whom » activities were carried out.**

Measures of joint leisure

- **a) Partners reported the same leisure activity (out of 46) on the same time interval and both reported that they did this activity with family.**

- **b) Partners reported the same leisure activity (out of 46) during the same time interval and both reported also the same place.**

- **c) Exactly the same leisure activity (out of 46) on the same time interval (no matter where or with whom).**

- **d) Any leisure activity (any of the 46) on the same time interval and at the same place. For example, the husband reads and the wife watches television, on the same time slot and they are both at home.**

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	Male partner 50-70		Female partner 50-70	
	Participation rate	Mean duration	Participation rate	Mean duration
Market work, standard question	24.74	112.01	25.02	94.15
Market work, diary	29.82	137.83	21.67	86.04
Joint Leisure (a)	93.77	159.79	93.77	159.79
Joint Leisure (b)	96.26	195.47	96.26	195.47
Joint Leisure (c)	97.60	215.88	97.60	215.88
Joint Leisure (d)	97.99	237.96	97.99	237.96
Disjoint Leisure (a)	99.42	302.42	97.60	228.24
Disjoint leisure (b)	99.23	266.74	96.55	192.55
Disjoint leisure (c)	99.04	246.34	96.26	172.15
Disjoint leisure (d)	98.95	224.26	95.59	150.07

Identification

- **Individuals on the two sides of the legal retirement age cut-off are expected to be very similar: a Regression Discontinuity design is close to an experimental design (Lee and Lemieux, 2010).**

- **Age cannot be manipulated.**

- **Under a "sharp" RD design, everyone would retire when they reach age 60 : the jump in the retirement probability would be equal to one.**

- **However, some individuals may retire earlier and others may retire later.**

- **A "Fuzzy" RD design allows for a jump greater than zero but less than one in the probability of retirement at the age cut-off and it can be modeled using 2SLS Two Stages Least Squares (Jinyong Hahn, Petra Todd and Wilbert van der Klaauw, Econometrica 2001)**

Identification

- Is the timing of retirement precisely anticipated ? We argue that it is NOT because:

_ there is no mandatory advance notice to employers and social security offices

_ there are complex additional rules on pension contributions for obtaining max pensionable benefits that are very complex and vary with sector of employment and year of birth and gender

_ errors in social security files are very common

_substantial evidence for France that the business cycle affects the individual retirement probability and noone can anticipate the business cycle

THE ECONOMETRIC MODEL : IV models (2SLS)

1. $L_m = Z_m \beta^{lm} + Z_f \beta^{lf} + R_m \gamma^{lm} + R_f \gamma^{lf} + Age_m \psi^{lm} + Age_f \psi^{lf} + \nu^{lm}$

2. $L_f = Z_m \lambda^{lm} + Z_{if} \lambda^{lf} + R_m \delta^{lm} + R_f \delta^{lf} + Age_m \zeta^{lm} + Age_f \zeta^{lf} + \nu^{lf}$

3. $L_j = Z_m \lambda^{ljm} + Z_{if} \lambda^{ljf} + R_m \delta^{ljm} + R_f \delta^{ljf} + Age_m \zeta^{ljm} + Age_f \zeta^{ljf} + \nu^{lj}$

$R_{im} = Z_m \beta^{rm} + Z_f \beta^{rf} + D_m \gamma^{rm} + Age_m D_m \eta^{rm} + Age_m \pi^{rm} + D_f \gamma^{rf} +$
    $+ Age_f D_f \eta^{rf} + Age_f \pi^{rf} + \nu^{rm};$

$R_{if} = Z_m \lambda^{rm} + Z_f \lambda^{rf} + D_m \delta^{rm} + Age_m D_m \tau^{rm} + Age_m \mu^{rm} + D_f \delta^{rf} +$
    $+ Age_f D_f \tau^{rf} + Age_f \mu^{rf} + \nu^{rf};$

$Age_m = [(Age_m - 60), (Age_m - 60)^2, \ldots, (Age_m - 60)^n]$
$Age_f = [(Age_f - 60), (Age_f - 60)^2, \ldots, (Age_f - 60)^n]$

Retirement as a function of own and partner's age (bins of ten months).


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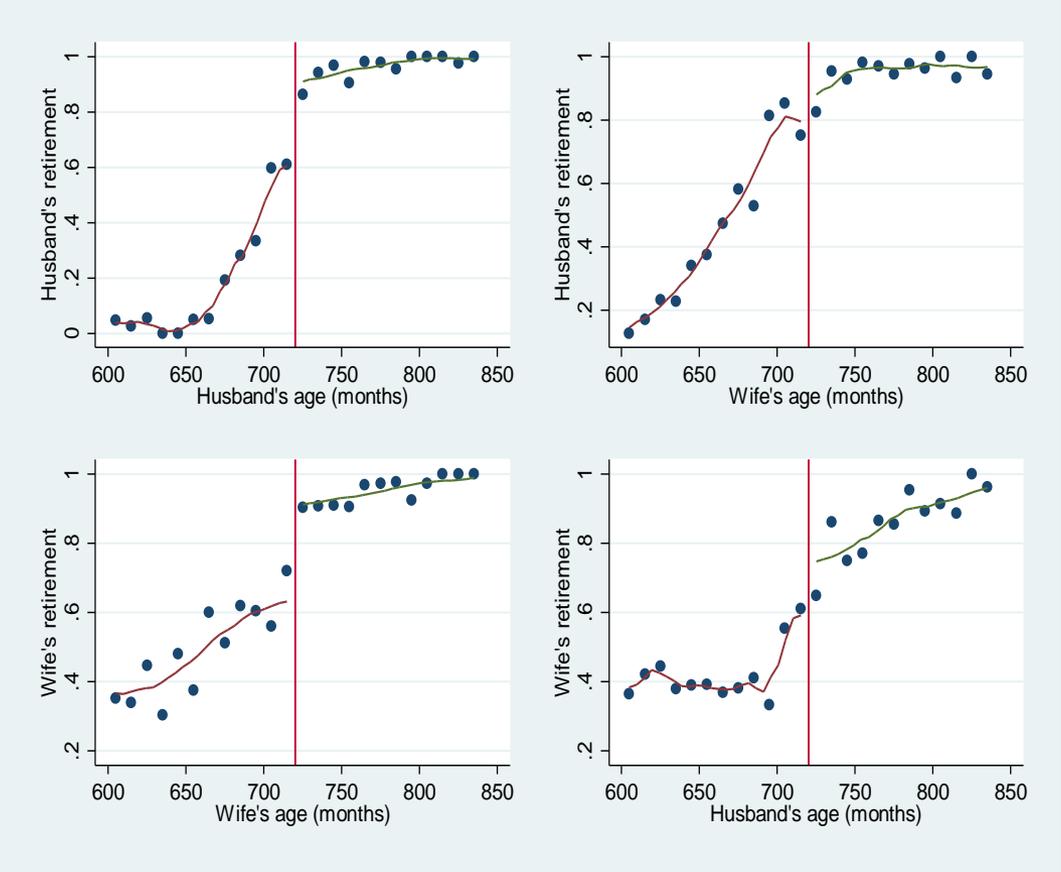
Joint and separate leisure as a function of age (bins of ten months) Definition (a) of joint leisure (narrowest definition)


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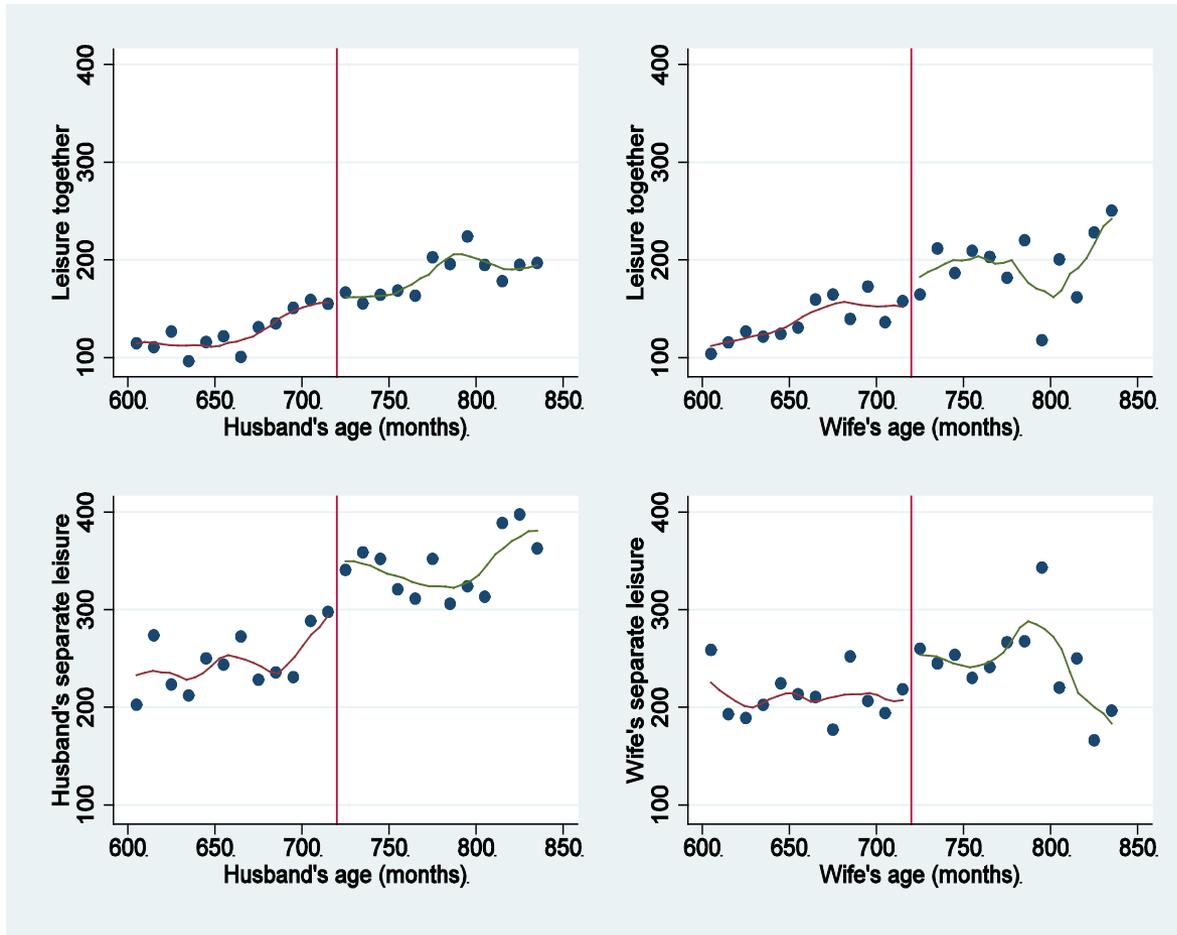
Joint and separate leisure as a function of age (bins of ten months)   Definition (d) (the broadest) of joint leisure

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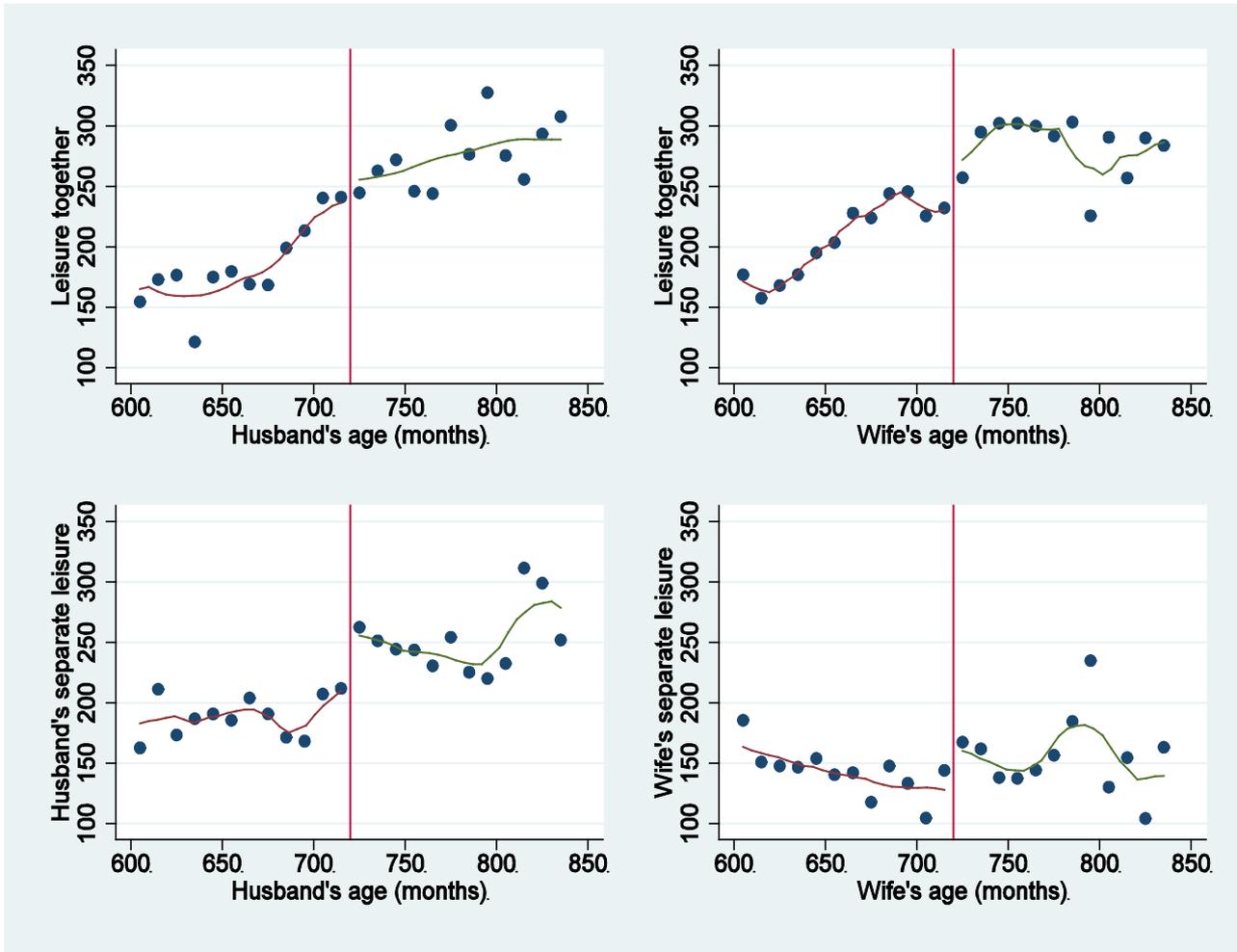
Time spent on house work and on caring for others as a function of age (bins of ten months)

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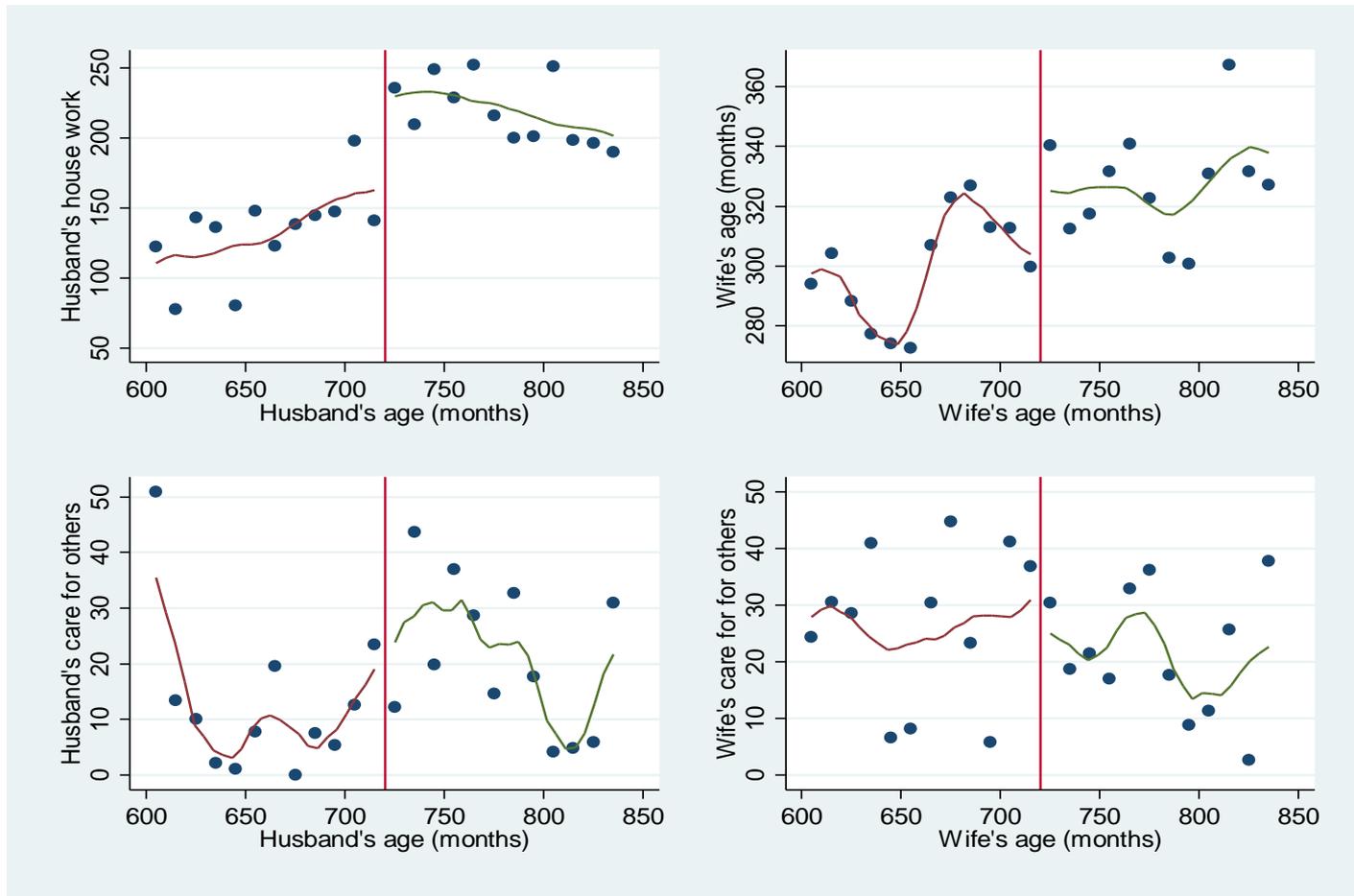
assuming that retirement is exogenous				
Outcome definition a, same leisure activity, same time interval, with family				
	His separate leisure		**Her separate leisure**		**Joint Leisure**
He Retired	115.749***		-24.91*		78.40***
	(17.454)		(13.63)		(13.45)
She retired	-21.505*		60.98**		43.77***
	(12.444)		(9.72)		(9.59)
Mean leisure (at age 55-59)	268.9		209.36		138
Outcome definition d, any leisure activity, same time interval, same place				
	His separate leisure		**Her separate leisure**		**Joint Leisure**
He Retired	99.20***		-41.29***		94.76***
	(15.27)		(12.34)		(13.689)
She retired	-27.40**		55.53***		49.217***
	(11.39)		(8.80)		(9.760)
Mean leisure (at age 55-59)	207.61		148.07		199.45

Table 4. The effect of retirement on joint and separate leisure: Simultaneous equation estimates, instrumenting retirement of both partners with the age≥60 dummies; no other controls except age functions

	His Retirement		Her Retirement			
His age 60 & above	0.380***		0.157**			
	(0.035)		(0.051)			
Her age 60 & above	0.031		0.187***			
	(0.035)		(0.051)			
Mean retirement (age 55-59)	0.3259		0.485			

Outcome definition d, any leisure activity, same time interval, same place

	His separate leisure		Her separate leisure		Joint Leisure	
He Retired	225.13**		-54.51		-63.56	
	(81.40		(60.17)		(74.47)	
She retired	-218.46*		176.47**		218.98**	
	(122.16)		(90.30)		(111.78)	
Mean leisure (at age 55-59)	207.61		148.07		199.45	

Conclusions

- **In the literature on partners' retirement decisions, the main explanation for joint retirement is leisure complementarities.**

- **This is the first study to investigate the extent to which leisure hours together of partners change upon retirement.**

- **We use diary data on leisure activities of French couples in the age group 50-70 to investigate the causal effect of both partners' retirement on the time spent on separate and joint leisure activities.**

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Conclusions

- **Our identification strategy builds upon the fact that for many French workers the legal retirement age is sixty, which enables us to exploit the jump in the retirement probability at age 60 to estimate the causal effect of retirement on partners' leisure hours separate or together.**

- **We specify and estimate a five simultaneous equation model with two retirement equations, two separate leisure equations, and an equation for joint leisure.**

- **We find a significant jump in the own retirement probability at age 60, equal to about 0.38 for the husband and 0.34 for the wife, which supports our identification strategy.**

Conclusions

- **A robust finding is that the husband's retirement leads to a dramatic increase in the husband's leisure time spent separately from the wife, by more than three hours per day.**

- **This may be explained by the fact that the husband is often the first to retire as he is usually older than the wife.**

- **Accordingly, we find that the husband's retirement has no effect on partners' joint leisure in any of the models accounting for endogeneity of retirement, except for couples in which the wife is a "housewife" that see their joint leisure increase by less than an hour per day when the husband retires.**

- **The wife's retirement increases her separate leisure hours by a large amount (three or more hours per day) and increases joint leisure hours -though these effects are not robust to dropping couples in which the wife is a "housewife", perhaps also due to the smaller sample size.**

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Conclusions

- **All in all, we conclude that retirement leads to a modest increase in partners' joint leisure hours, which is not larger than the increase in separate leisure hours or in house work.**

- **This suggests that leisure complementarities in partners' retirement are less important than anticipated in the joint retirement literature.**

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