The Effect of Retirement on Consumption

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Consumption in Retirement

Workers know that retirement will occur in the future (typically around 65 years of age)

Standard lifecycle model: agents smooth lifetime consumption in response to expected income changes

However, evidence shows consumption declines at retirement

- Haider and Stephens Jr. (2007); Villaverde and Krueger (2007); Banks et al. (1998); Hamermesh (1984); Laitner and Silverman (2005)

Apparent "retirement consumption puzzle"

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Consumption in Retirement

Recent work attributes consumption decline to work-related expenses

Meals outside the home & clothing

- Battistin et al. (2009); Luengo-Prado and Sevilla (2012); Miniaci et al. (2010); Aguila et al. (2011)

Food consumption smoothed by substituting time for expenditure

- Aguiar and Hurst (2005); Stancanelli and Van Soest (2012); Agarwal et al. (2015)

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Our Contribution

Use HBS data from 1987 to 2016 to examine how consumption changes as individuals move into retirement in Ireland

Compared to existing work, we study a wider range of nondurable consumption categories

- Researchers often constrained to food expenditure only (Smith, 2006)
- Food may be an unsuitable proxy for total consumption (Attanasio and Weber, 1995)

Examine heterogeneous effects by household type and gender

Data

Household Budget Survey (1987 to 2016)

* 1987-88; 1994-95; 1999-00; 2004-05; 2009-10; 2015-16

Detailed expenditure

* Approx. 600 items of expenditure in 2015
* Aggregate into 7 nondurable categories
* Meals at home; meals outside the home; clothes and shoes; leisure; alcohol; tobacco; holidays

Data on household income, composition and economic status of household members

Data on characteristics such as age, education, gender

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Descriptive Statistics

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
Years	1987-1988	1994-1995	1999-2000	2004-2005	2009-2010	2015-2016
Income (constant 2015 Prices)						
Working	€467	€534	€709	€957	€1,006	€902
Retired	€253	€292	€356	€464	€570	€550
Expenditure (as a % of income)						
Working	47%	43%	42%	32%	27%	28%
Retired	57%	51%	50%	41%	33%	31%
Sample size	1919	2174	2367	2277	2258	2795

Methodology

Follow cohorts over time to compare their pre-retirement and post-retirement spending

Look at employed individuals aged 55-64 years who appeared in the HBS survey at time period *t*

Look at the HBS survey ten years later, at time period *t+1*, and observe retired individuals who are aged 65-74 years

- Focus only on retirees who retired a maximum of ten years earlier

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Methodology

Control for spending effects which may be related to other factors (e.g. business cycle, changing tastes, preferences etc.)

Use a control group consisting of individuals of a similar age who were working at both time *t* and time *t+1*

Subtract the change in spending of the control group from the change in spending of our treatment group

A difference-in-differences type estimator

$$Spending_{i,t} = \alpha + \delta T_i + \gamma Y_t + \beta T_i * Y_t + X_{i,t}'\theta + \varepsilon_{i,t}$$

Results

Table 2: Effect of Retirement on Nondurable Spending

VARIABLES	Two Adults: Other Adult Working	Two Adults: Other Adult Not Working	One Adult
Retired	-18.68	-29.62**	-49.08***
	[-13.89%]	[-12.75%**]	[-33.64%***]
	(33.67)	(13.58)	(12.37)
T	-2.85	24.18***	35.85***
	(22.34)	(9.05)	(8.54)
Y	-16.54	-2.73	-6.68
	(33.60)	(13.29)	(12.57)
Male	-18.03	16.70*	-2.71
	(16.32)	(10.08)	(6.34)
Low Education	-109.45***	-95.70***	-66.80***
	(15.93)	(9.07)	(8.75)
Medium Education	-37.33*	-55.83***	-24.41**
	(20.57)	(11.58)	(10.83)
Year dummies	Yes	Yes	Yes
Constant	290.42***	242.45***	138.62***
	(46.57)	(34.09)	(21.36)
Observations	507	1,511	1,171
R-squared	0.14	0.12	0.15

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Results

One-Adult Households						
VARIABLES	Meals Home	Meals Out	Clothes & Shoes	Leisure	Alcohol	Tobacco	Holidays
Retired	-0.60	-15.27***	-2.97	-8.67*	-4.69	-1.34	-15.54**
	(3.31)	(3.52)	(2.38)	(5.19)	(3.81)	(2.45)	(6.35)

Two-Adult Households (Other Adult Working)						
	Meals Home	Meals Out	Clothes & Shoes	Leisure	Alcohol	Tobacco	Holidays
Retired	2.02	-16.61**	-4.77	10.52	5.09	5.27	-20.21
	(8.09)	(8.28)	(5.84)	(9.47)	(9.69)	(4.65)	(17.14)

Two-Adult Households (Other Adult Not Working)						
	Meals Home	Meals Out	Clothes & Shoes	Leisure	Alcohol	Tobacco	Holidays
Retired	-4.36	-7.19*	-4.07	2.91	-6.88*	-2.22	-7.81
	(4.66)	(3.76)	(3.55)	(2.55)	(3.78)	(2.67)	(6.38)

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Results

One-Adult Household (Male)							
VARIABLES	Meals Home	Meals Out	Clothes & Shoes	Leisure	Alcohol	Tobacco	Holidays
Retired	-0.33	-14.39***	-0.15	-11.91**	-4.02	1.45	-16.89***
	(3.96)	(4.58)	(2.39)	(6.04)	(5.41)	(3.28)	(5.81)

One-Adult Household (Female)							
	Meals Home	Meals Out	Clothes & Shoes	Leisure	Alcohol	Tobacco	Holidays
Retired	-1.29	-17.05***	-6.43	-2.41	-5.21	-6.31**	-14.32
	(6.09)	(5.65)	(5.75)	(12.35)	(3.72)	(2.87)	(18.63)

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Results

Table A2: Probability of positive expenditure

Household Type	(2) Meals Home	(3) Meals Out	(4) Clothes & Shoes	(5) Leisure	(6) Alcohol	(7) Tobacco	(8) Holiday
One Adult	-0.00	-0.20***	-0.10	0.06	-0.04	0.03	-0.18***
	(0.01)	(0.07)	(0.06)	(0.05)	(0.07)	(0.06)	(0.06)
	n=1159	n=1159	n=1159	n=1159	n=1159	n=1159	n=1159
Two Adults:	-0.00	-0.08	-0.05	-0.01	-0.02	0.04	-0.01
Other Not Working	(0.00)	(0.06)	(0.06)	(0.02)	(0.06)	(0.05)	(0.06)
	n=1494	n=1494	n=1494	n=1494	n=1494	n=1494	n=1494
Two Adults:	0.01	-0.17*	-0.13	-0.04	0.03	0.18*	-0.17*
Other Working	(0.01)	(0.09)	(0.10)	(0.03)	(0.09)	(0.10)	(0.10)
	n=505	n=505	n=505	n=505	n=505	n=505	n=505
One Adult: Male	0.00	-0.16*	0.00	0.04	-0.01	0.13*	-0.20***
	(0.02)	(0.08)	(0.07)	(0.07)	(0.08)	(0.07)	(0.07)
	n=683	n=683	n=683	n=683	n=683	n=683	n=683
One Adult:	0.01	-0.31***	-0.30**	0.08	-0.08	-0.20**	-0.10
Female	(0.01)	(0.12)	(0.12)	(0.07)	(0.12)	(0.10)	(0.12)
	n=476	n=476	n=476	n=476	n=476	n=476	n=476

Results

Table A1: Effect of Retirement on Nondurable Spending (Expressed as % of Disposable Income)

Household Type	(2) Meals Home	(3) Meals Out	(4) Clothes & Shoes	(5) Leisure	(6) Alcohol	(7) Tobacco	(8) Holiday
One Adult	5.91**	-1.89	0.14	-0.38	1.03	0.04	-0.48
	(2.71)	(1.47)	(1.19)	(0.98)	(1.27)	(0.80)	(1.00)
	n=1159	n=1159	n=1159	n=1159	n=1159	n=1159	n=1159
Two Adults: Other Not Working	9.91***	0.09	0.84	1.86***	0.63	0.33	0.32
	(3.72)	(0.52)	(1.16)	(0.54)	(0.68)	(0.59)	(0.82)
	n=1494	n=1494	n=1494	n=1494	n=1494	n=1494	n=1494
Two Adults: Other Working	4.84**	-0.95	-0.27	1.33	2.38*	1.21*	-0.91
	(2.18)	(1.15)	(1.24)	(0.87)	(1.23)	(0.69)	(1.62)
	n=505	n=505	n=505	n=505	n=505	n=505	n=505
One Adult: Male	2.23	-1.84	1.17	-1.70	2.04	0.53	-1.09
	(3.55)	(1.95)	(1.42)	(1.33)	(1.80)	(1.11)	(0.98)
	n=683	n=683	n=683	n=683	n=683	n=683	n=683
One Adult: Female	12.25***	-2.15	-1.13	1.90	-0.55	-0.71	0.26
	(4.04)	(1.52)	(1.99)	(1.48)	(1.00)	(0.83)	(2.61)
	n=476	n=476	n=476	n=476	n=476	n=476	n=476

1

Conclusions (I)

Decline in non-durable spending in retirement

- 2 adult households (other adult not working): 13%
- 1 adult households: 34%
- 2 adult households (other adult working): no significant effect

Driven to a large extent by lower spending on meals outside the home

Meals at home unaffected

- Retired households smooth home food consumption by devoting a greater percentage of their income to this category

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Conclusions (II)

Gender differences (one-adult households)

- Retired men spend less on meals outside the home, leisure and holidays

- Retired women spend less on meals outside the home and clothing

Decline in leisure spending may be of concern if it points to social isolation in retirement

- For some individuals, especially single people, work and social activities may be closely linked

- Existing evidence shows older men have a higher mortality risk from social isolation than older women (Yang et al., 2013)

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