

Do the Retired Elderly in Europe Decumulate Their Wealth? The Importance of Bequest Motives, Precautionary Saving, Public Pensions, and Homeownership

**Center for Computational Social Science and Research
Institute for Economics and Business Administration, Kobe
University; Institute of Social and Economic Research,
Osaka University; Asian Growth Research Institute; and
National Bureau of Economic Research**

**Luigi Ventura
Sapienza University of Rome**

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INTRODUCTION

Background:

Two Puzzles concerning the Consumption and Saving Behavior of the Elderly

- (1) “The Retirement Consumption Puzzle”
Why does consumption decline sharply after retirement?
- 2) “The Wealth Decumulation Puzzle”
Why do the retired elderly decumulate their wealth more slowly than expected?

Background:

“Wealth Decumulation Puzzle”

- Previous studies for many countries find that the retired elderly decumulate their wealth but that their rate of wealth decumulation is much slower than predicted by the simple life cycle model with no longevity risk and no bequest motives.
- It is important to understand the saving behavior of the elderly because they hold a substantial share of household wealth. For example, in OECD, households with a head who is 55 or older feature a median wealth which is over 50% higher than that held by households headed by middle aged individuals.

Background: Possible Explanations of the Puzzle

- (1) Bequest motives.
- (2) Precautionary saving arising from longevity risk (lifespan uncertainty) and/or future medical and long-term care expenses.
- (3) The reluctance of the elderly to sell or to borrow against owner-occupied housing.

However, the empirical literature has not yet reached a consensus on the relative importance of the different explanations.

Research Questions

- (1) Does the Wealth Decumulation Puzzle apply in the case of Europe (i.e., do retired households in Europe decumulate their wealth, and if so, at what speed?)
- (2) If the wealth decumulation rate of retired households in Europe is too low, why?
- (3) Is it due to bequest motives, to precautionary saving arising from longevity risk or future medical and long-term care expenses, or to the reluctance of the elderly to sell or to borrow against owner-occupied housing?
- (4) Is the saving behavior of the retired elderly in Europe different from that of the retired elderly in other countries?

Contribution of This Paper

- (1) This paper is among the first to shed light on the relative importance of intergenerational transfers (bequests), precautionary saving, and homeownership as possible explanations for the low wealth decumulation rates of the retired elderly over a large set of European countries.
- (2) To do so, this paper makes use of data directly related to bequest intentions.

Contribution of This Paper

- 3) This paper accounts for endogeneity of bequest intentions.
- 4) This paper focuses on the behavior of the retired elderly, not of all the elderly.
- 5) This paper uses data relating to precautionary saving arising from longevity risk and/or uncertain future medical and long-term care expenses.
- 6) The paper focuses on the elderly who live apart from their children.

LITERATURE REVIEW

Literature Review

- No consensus on the relative importance of alternative explanations for explaining the lower than expected wealth decumulation rates of the elderly.
 - US:
 - Evidence in favor of a bequest motive:
 - Lockwood (2014)
 - Ameriks et al. (2011)
 - Evidence in favor of precautionary saving:
 - Hurd (1987, 1989)
 - Ameriks *et al.* (2015)
 - De Nardi, French, and Jones (2010, 2016)

Literature Review

- Europe/Australia
 - Limited effects of health shocks as retirees are well covered for medical expenses.
 - Spicer, Stavrunova, and Thorp (2016) for Australia
 - Van Ooijen, Alessie, and Kalwij (2015) for the Netherlands
 - Inability to consume all annuity income in very old age
 - Börsch-Supan (1992)
 - Ventura and Horioka (2020), bequest more important than precautionary motive in Italy.
- Japan
 - Previous studies show that the elderly dissave once they retire/stop working.
 - Horioka (2010), Horioka *et al.* (1996), and Usuki, Kitamura, and Nakajima (2016)
 - The reasons for the slow decumulation of wealth by the elderly have been rarely examined.
 - Horioka *et al.* (1996) and Horioka *et al.* (2002) provide some evidence in favor of a bequest motive.

DATA SOURCE

Data Source

“Survey of Health, Ageing and Retirement in Europe” (SHARE)

- A longitudinal panel survey of about 140,000 individuals aged 50 or older from a large number of countries in Europe and Israel that has been conducted every 2 to 3 years since 2004.
- We used data from Wave 1, which was conducted in 2004-05, and Wave 2, which was conducted in 2006-07. We chose these waves because they are the only waves that included questions about leaving inheritances.

Data Source

“Survey of Health, Ageing and Retirement in Europe” (SHARE)

- Stringent sample selection criteria:
- Single-person or couple households in which both spouses are aged 60 or older, retired, with at least one non cohabiting child, and for which all of the necessary information is available.
- Excluded observations for which the net wealth growth rate was $< -100\%$ and $> 200\%$.
- Also, we eliminated observations with zero initial or final net wealth.
- Countries: Austria, Belgium, Denmark, France, Germany, Greece, Italy, Netherlands, Sweden, and Switzerland.

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DOES THE WEALTH DECUMULATION PUZZLE APPLY IN EUROPE?

Data on Wealth Accumulation Rates

Overall, about 6.6% over a 3-year period.

Thus, on average the retired elderly in Europe are not decumulating their wealth (dissaving) at all; in fact, they are continuing to accumulate wealth (save), albeit to a limited extent.

Conclusion: The “Wealth Decumulation Puzzle” applies in Europe.

Data on Wealth Accumulation and bequest intentions

Table 2: Proportions of Accumulators and Decumulators by Bequest Intentions. Category of households	Bequest intentions				
	No bequest	Small bequest	Medium bequest	Large bequest	Total
Wealth decumulators	48	105	87	167	407
	11.79	25.79	21.37	41.03	100.00
	53.93	52.76	43.07	38.22	43.90
Wealth accumulators	41	94	115	270	520
	7.88	18.08	22.11	51.92	100.00
	46.07	47.24	56.93	61.78	56.09
Total	89	199	202	437	927
	9.60	21.47	21.79	47.14	100.00
	100.00	100.00	100.00	100.00	100.00

Data on Wealth Accumulation Rates and bequest intentions

Table 3: Wealth Accumulation Rates by Bequest Intentions	No. of obs.	Mean	Standard deviation	Minimum	Maximum
No bequest	74	-12.038	66.774	-100	166.329
Small bequest	175	-3	58.866	-93.613	195.054
Medium bequest	180	6.042	51.961	-94.682	168.801
Large bequest	382	14.697	56.688	-98.959	195.635
Total	811	6.607	57.85	-99.999	195.635

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THE DETERMINANTS OF THE SAVING BEHAVIOR OF THE RETIRED ELDERLY IN EUROPE

Dependent Variable for Probit/Logit

- A variable taking values:
- 1 = the respondent's wealth increased between the two waves;
- 0 = otherwise.

Dependent Variable for OLS (and Tobit):

- WEALTHRATE = the wealth accumulation rate, calculated as the percentage change in wealth between the two waves (in practice for a 3-year period), where wealth is defined as the sum of financial assets and real assets minus liabilities. (Thus, it is negative in the case of respondents whose wealth declined between the two waves.)
- Separate analyses for full sample and (+/- rates).

Explanatory Variables

Bequests related:

LARGEBEQ = perceived probability of leaving a bequest of 150,000 euros or more;

- MEDIUMBEQ = perceived probability of leaving a bequest of 50,000 euros or more but less than 150,000 euros;

- SMALLBEQ = perceived probability of leaving a bequest of less than 50,000 euros and zero otherwise.

- In robustness checks, we also used dummy variables taking value 1 if the corresponding probability was positive, zero otherwise.

Explanatory Variables

Precautionary saving related:

- HEALTH = a dummy variable that equals one if the respondent has a positive perception of his or her health and zero otherwise;
- LIFEEXP = a dummy variable that equals one if all household members expect to live for more than 10 years and zero otherwise;
- ILLNESS = a dummy variable that equals one if the respondent suffers from a chronic or long-term health problem and zero otherwise.

Explanatory Variables

(Financial) risk aversion related:

- **HIGHESTRISK** = a dummy variable that equals one if the respondent is willing to take substantial financial risks in order to earn substantial returns and zero otherwise;
- **AVERAGERISK** = a dummy variable that equals one if the respondent is willing to take average financial risks in order to earn average returns and zero otherwise
- **LITTLERISK** = a dummy variable that equals one if the respondent is willing to take little financial risks in order to earn low returns and zero otherwise
- **NORISK** = a dummy variable that equals one if the respondent is not willing to take any financial risks and zero otherwise

Explanatory Variables

Social security related:

PENSION = natural logarithm of pension income;

REPLRATE = an average replacement rate, computed as the median individual gross pension (of people aged 65-74) relative to median individual gross earnings (of people aged 50 – 59), in 2006 (source EU-SILC).

Control Variables

- Respondent's age
- Square of respondent's age
- Gender
- Respondent's educational attainment
- Respondent's marital status
- Number of non coresident children
- Net worth as of first wave
- Country dummies.

Results for Probit (Marginal effects)

	Full sample	Homeown	Renters
Age	-0.092	-0.067	-0.114
	(0.016)***	(0.021)***	(0.042)***
Age^2/100	0.059	0.041	0.079
	(0.011)***	(0.016)***	(0.028)***
Number of children	-0.013	0.04	-0.064
	(0.017)	(0.036)	(0.018)***
	(0.133)	(0.058)***	(0.07)***
Prob. of leaving a large bequest	0.004	0.004	0.003
	(0)***	(0)***	(0)***
Positive health perception	0.07	0.077	0.073
	(0.029)**	(0.03)***	(0.074)
Expect to live more than 10 years	-0.063	-0.105	0.102
	(0.038)*	(0.062)*	(0.044)**
Long-term health problems	-0.057	0.011	-0.171
	(0.068)	(0.036)	(0.103)*
Av. pension repl. ratio	0.002	0.002	0.008
	(0.001)***	(0.001)	(0.002)***
Log of gross pension income	0.012	-0.003	0.027
	(0.006)*	(0.004)	(0.018)
Least risk-averse	1.479	1.16	.
	(0.06)***	(0.185)***	
Moderately risk-averse	-0.037	-0.048	0.334
	(0.123)	(0.061)	(0.05)***
Risk-averse	-0.001	-0.036	-0.017
	(0.034)	(0.021)*	(0.073)
No. of obs.	927	539	385

Results for Accumulation Rates (OLS)

	Full sample	Decumulators	Accumulators
Age	-8.605	-2.591	9.253
Age ² /100	5.467	1.757	-6.394
Number of children	0.556	-0.149	3.499
Separated	-38.333***	-22.188**	-26.120*
Never married	-18.424	-23.226***	24.228
Widowed	-2.861	-7.284*	24.752**
Prob. of leaving a large bequest	0.447***	0.205***	0.211*
Positive health perception	12.905**	7.908**	10.645*
Expect to live more than 10 years	-6.435	-2.059	-0.314
Long-term health problems	-7.938	5.317*	-9.054
Average pension replacement ratio	-0.454***	-0.728***	-0.556***
Log of gross pension income	1.428	1.099**	-0.296
Least risk-averse	134.714***		112.677***
Moderately risk-averse	3.691	5.749	21.755
Risk-averse	11.106***	5.023	26.041
R ²	0.25	0.24	0.29
No. of obs.	811	401	410

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Summary of Results

- These findings imply that the failure of the retired elderly in Europe to decumulate their wealth (dissave) is due mainly to the presence of bequest motives.
- As for the quantitative impact, the coefficient of the bequest intention variable in the wealth accumulation equation implies that an increase of 10% in the probability of leaving a large bequests raises the wealth accumulation rate by about 4%.

Summary of Results

- Lowering the probability of leaving a large bequest from the sample mean of 35.5% to zero would lower the wealth accumulation rate by 15.9%, from a positive 6.6% to a negative 9.3%, in line with the predictions of a standard life cycle model.
- The replacement rate has a negative impact on accumulation rates, consistent with expectations that public pensions provide a hedge against longevity risk.
- Positive health perceptions increase accumulation rates.

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Robustness checks

- IV estimation (both ordered Probit and Tobit), where the instrument is given by bequests received (in the past);
- Ordered logit, with odds-ratios;
- Switching models, i.e. models with changes in bequest intentions (from wave 1 to wave 2) as regressors.

Robustness checks

- Empirical analysis performed separately on homeowners and renters.
- We found huge differences in the wealth accumulation behavior of homeowners and renters, with the wealth accumulation rates of homeowners and renters being 13.4% and -2.4%, respectively.
- Thus, the Wealth Decumulation Puzzle applies only to retired elderly homeowners and that it is due, in large part, to the reluctance of retired elderly homeowners to sell or to borrow against their owner-occupied housing.

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SUMMARY AND POLICY IMPLICATIONS

Summary of Findings

- In this paper, we analyze the wealth accumulation (saving) behavior of the retired elderly in Europe using micro data from the SHARE survey in order to examine whether or not the “Wealth Decumulation Puzzle” applies in the case of Europe, and if so, why.
- We find that the “Wealth Decumulation Puzzle” applies in Europe: the retired elderly in Europe are not decumulating their wealth (dissaving) on average; in fact, on average they are continuing to accumulate wealth (save).

Summary of Findings

- We then find that the failure of the retired elderly in Europe to decumulate (dissave) more is mainly due to the presence of bequest intentions, the reluctance of homeowners to sell or borrow against their owner-occupied housing, and, to a very limited extent, to the presence of precautionary motives.
- Our findings suggest that bequests are rather important in Europe.

Policy Implications

- Our finding that the retired elderly in Europe are continuing to accumulate wealth (save) implies that Europe's household saving rate will not necessarily decline as her population ages.

Policy Implications

- Our findings imply that we can stimulate the consumption of the retired elderly in Europe by (1) raising inheritance taxes, thereby weakening their incentive to leave bequests to their children, and (2) expanding the market for reverse mortgages, thereby making it easier for the retired elderly to borrow against their owner-occupied housing to finance their consumption expenses.

Thank you!