

WEALTH, CONSUMPTION, AND SAVINGS PATTERNS IN RETIREMENT: A CHALLENGE TO THE LIFE-CYCLE HYPOTHESIS

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Abstract: *This paper investigates the wealth, consumption, and savings behavior of elderly individuals through the lens of the life-cycle hypothesis. Using data from Survey of Health, Ageing and Retirement, we employ Student's t-test to test differences between pre-retirement and retirement age groups. The findings shed light on the extent to which elderly individuals adhere to the life-cycle hypothesis and provide insights into the economic behavior of this demographic group. Our findings align with previous studies indicating that the life-cycle theory inadequately captures the dynamics of wealth, consumption, and savings during retirement age. According to our results, there is a consistent decrease in all examined variables with advancing age, with the lowest yet non-zero values observed among the oldest individuals.*

Keywords: *Life-cycle Hypothesis, Retirement, Wealth, Consumption, Savings*

JEL Classification: D12, G51, J14

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1 Introduction

Examining savings provides valuable insights into individual and household financial well-being, consumption patterns, investment behavior, and economic stability, all of which have broader implications for both households and the overall economy (IFP, 2010).

According to Oinonen and Viren (2022), household saving holds significant importance for several reasons. Firstly, by saving for unforeseen circumstances or economic downturns, households demonstrate their awareness of the need for financial security. Household saving also influences the future development of household indebtedness. Finally, it provides information about the sensitivity of households to changes in interest rates, etc.

According to Bhutta et al. (2020) almost 40 percent of total nonpension wealth in the United States is held by households whose heads are 65 or older. Data obtained from OECD (2021) suggest that over 50% of households headed by individuals between the ages of 55 to 74, encompassing both pre-retirement and retirement age, fall within the top two wealth quintiles. This includes a substantial 28% of households positioned in the highest quintile of wealth. As the population continues to grow older, the significance of savings for retirees will only increase.

The degree to which elderly individuals in retirement actively decrease their wealth (dissaving) will play a crucial role in shaping the future trajectory of the overall household saving rate amid the aging population. Understanding more about the factors influencing the accumulation of wealth and saving patterns among retired individuals will provide insights into making effective policies aimed at promoting consumption and improving the living standards of the elderly in retirement (Ventura and Horioka, 2020).

The main objective of this paper is to test life-cycle hypothesis on wealth, consumption, and savings between elderly people in pre-retirement and retirement age. We use the data from the latest wave of the Survey of Health, Ageing and Retirement in Europe. We found significant distinctions in wealth, consumption and saving tendencies among oldest individuals, suggesting that the life-cycle hypothesis may not adequately account for these observed patterns.

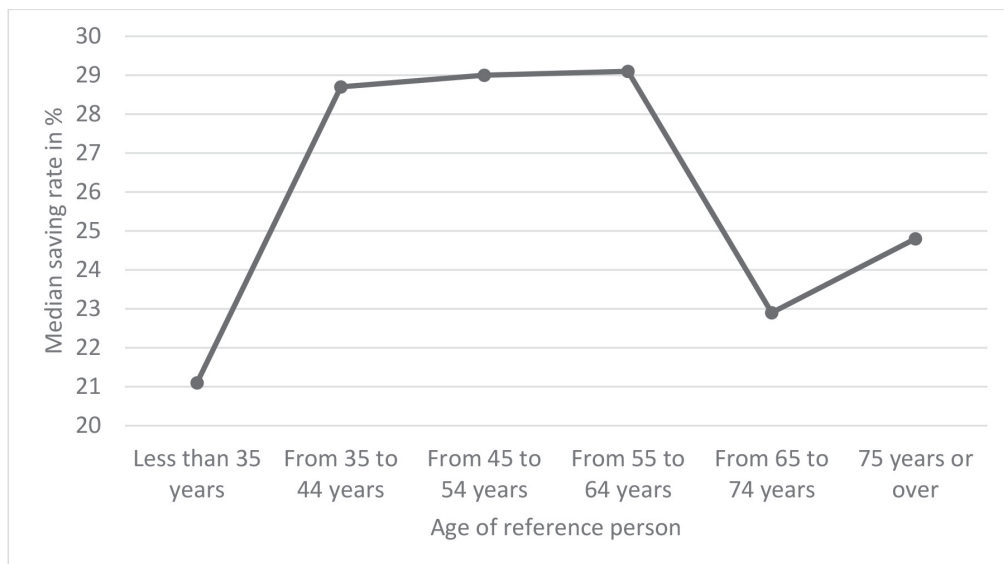
The paper is structured as follows. In the second section, we briefly discuss the review of prior literature on consumer choice and saving patterns including hypothesis formulation. The third section defines the data and methodology. In the next section we show the results on wealth, consumption, and savings behavior of elderly people in pre-retirement and retirement age. The last section summarizes the key findings.

2 Literature review

Consumer choice and saving patterns has been the subject of various theories, hypotheses, and empirical research for decades, e.g., the conventional life-cycle model, established by Modigliani and Brumberg (1954), posits that individuals aim to maintain a consistent level of consumption throughout their lives. As individuals typically experience fluctuations in their income over their lifetimes, this theory suggests that savings rates will also fluctuate accordingly. More specifically, savings rates are expected to be relatively low during early adulthood, increase as income grows with age, and then decline and potentially turn negative during retirement when earnings decrease. The primary motivation for saving is to accumulate resources that can be utilized for future expenditures, with a particular emphasis on financial needs during retirement. Life-cycle theory suggests that households will start reducing their wealth immediately upon retirement and eventually have no assets at the end of their lives.

In fact, numerous individuals pass away with significant estates. Retired households, mainly those with high lifetime income, dissave their assets very slowly. In the past two decades, a growing literature has tried to explain this phenomenon called “Retirement Savings Puzzle” (French, Jones and McGee, 2023). The data from Eurostat on the median value of the savings rate in individual age groups, shown on Figure 1 also describe this phenomenon.

Figure 1: Median saving rate (%) of households in EU in 2020



Note: European Union - 27 countries (from 2020)

Source: Eurostat

Consistent with the life cycle theory, Figure 1 shows a decline in savings after retirement age, although there are still significant savings remaining in the 65-74 and 75 + age groups. If we consider the life expectancy at birth in the countries of the European Union in 2020 (males = 77,5; females = 83,2²), it is very unlikely that an individual would spend all their savings, as the median savings rate still reaches almost 23 % in the age category from 65 to 74 and 25 % in the age category 75 +.

Mäki-Fränti (2022) studied the income and consumption levels of Finnish households and found out that they reach their highest point when the household heads are between the ages of 40 and 50, after which they gradually decline. However, the age-related effects estimated for the household saving rate do not align with the expectations of the typical life cycle model. Contrary to the hypothesis, households persist in saving even after reaching retirement age rather than depleting their savings.

Ventura and Horioka (2020) find that on average, retired elderly individuals in Italy are in a phase of wealth decumulation (dissaving). However, the rate

² Eurostat Statistics Explained: Mortality and life expectancy statistics. Source: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Mortality_and_life_expectancy_statistics

at which they are decumulating wealth is notably slower than anticipated. Over 40% of retired elderly individuals in Italy are still in the process of accumulating wealth, and more than 80% are engaging in positive amounts of saving.

Older conclusions from Blundell et al. (1995) also indicate the presence of a “Retirement Savings Puzzle”. It is expected for income to decrease post-retirement. Once a household retires, the primary source of income typically shifts to pension payments, with additional reliance on state benefits. However, the unexpected aspect lies in the decline of consumption, which seems to outpace the reduction in income. This suggests that retirees are not rapidly depleting their financial assets and might be saving a portion of their income, rather than spending it entirely. This shows that individuals are either consistently making errors in their expectations regarding retirement income, or if their expectations are accurate, their consumption and saving choices are not entirely explained by the life-cycle model.

In the broader context, research on the elderly indicates that the most straightforward life-cycle model falls short of fully elucidating consumer behavior. While saving for retirement undoubtedly stands as a significant motive for saving, it is evident that there must be other motivations (Mankiw, 2010).

The first possible explanation is a phenomenon called *precautionary savings* connected to lifespan uncertainty. The precautionary motive emerges since retired individuals and households are confronted with the risk of an extended lifespan and the potential for significant medical and long-term care expenses. Consequently, households may choose to retain their wealth to ensure coverage for such unforeseen expenditures (French, Jones and McGee, 2023). In a seminal study conducted by Davies in 1981, it was demonstrated that in situations where lifespans are uncertain and there is an absence of annuity income, individuals characterized by reasonable levels of risk aversion will never totally dissave their wealth. He demonstrates that when accounting for uncertainty in lifespan, the average annual rate of wealth decumulation between ages 65 and 85 is reduced from 7 percent to 3 percent compared to the standard life-cycle model. Hurd (1990) suggested that this uncertainty might prompt risk-neutral individuals to elevate their current consumption to avoid having unspent assets upon death. In contrast, risk-averse individuals would likely postpone current consumption to ensure that their wealth can cover a potentially longer and uncertain future.

Creating savings even after reaching retirement age can be motivated by the intention to preserve an inheritance for one's children or relatives (this is called a *bequest motive*). This motive can arise either because individuals enjoy leaving bequests (altruists), or because they use bequests to reward their caregivers and elicit care (strategic bequest) (see e.g., Mankiw, 2010, Mäki-Fränti, 2022 or French, Jones and McGee, 2023).

Additionally, French, Jones and McGee (2023) describes the fact that retirees may be hesitant to decumulate their housing wealth, as many derive satisfaction from living in their homes, considering costs associated with relocation, and confront a limited market for "reverse mortgages" that would enable them to reduce housing wealth without having to vacate their residences. As a result, older households tend to decumulate housing wealth at a slower rate compared to other forms of wealth.

Following the theoretical and empirical knowledge mentioned above we have formulated following hypothesis.

H1: Wealth, consumption and saving levels exhibit a statistically significant difference as age progresses, decreasing and reaching their lowest but non-zero values among the oldest individuals.

3 Methodology and data

We use the data from the eighth wave of the Survey of Health, Ageing and Retirement in Europe (SHARE). This dataset covers 27 European countries including one non-European country – Israel and it focuses mainly on elderly people, so the younger age groups are not frequently represented in the sample. We narrowed down the original dataset to individuals aged between 55 and 94 years covering pre-retirement age groups as retirement age groups.³ The life cycle hypothesis suggests that households reduce wealth, consumption and savings shortly after retirement. Hence, we included different age groups in the dataset to verify if data support this hypothesis, particularly if wealth, consumption and savings decline notably after retirement age (65+) compared to pre-retirement (55-59; 60-64). This reduced dataset includes 227 235 observations.

³The retirement statutory age is ranging from 62 to 67 in EU Member States. It is a complex system that reflect gender in some countries. For the sake of simplicity, we apply 65 years of age as the retirement statutory age in our analysis. This is a true value for majority of the EU counties but not all. We are aware of limitation of our research.

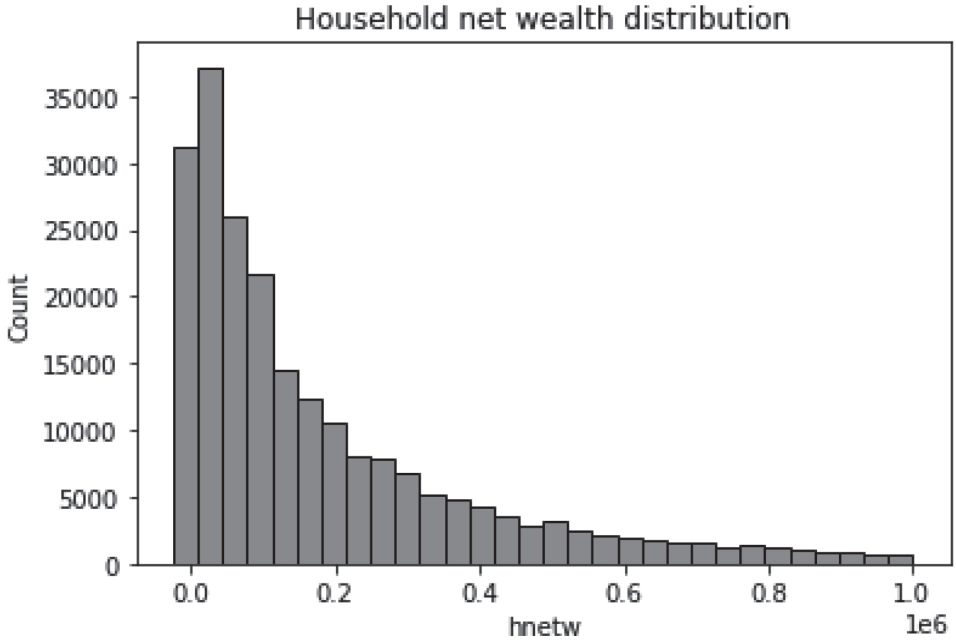
We analyze the differences in wealth, consumption and saving between individual age groups. The age groups cover 10 age categories with 5 year-intervals. As a proxy for consumption, we use variable *Total household expenditure* that represents sum of annual rent and home-related expenditures, annual food at consumption, annual home-produced consumption and out-of-pocket payment for care. For measuring savings, we use *Household net financial assets*. These variable measures money in bank accounts, investments in bond, stock and mutual funds and savings for long-term investments minus liabilities. We also include *Household net worth* as a proxy for wealth. Household net worth represents a sum of household net financial and real assets. This variable was incorporated in descriptive statistics to facilitate a broader examination of the rate of wealth decumulation among the elderly, since the theory summarized in the first part of the paper also deals with the slow decumulation of wealth.

For testing the hypothesis, we apply Student's t-test to investigate the statistical significance between the pre-retirement and retirement age groups. To test the robustness of our result we apply one-way ANOVA to test the stability of these results among individual European countries.

4 Results

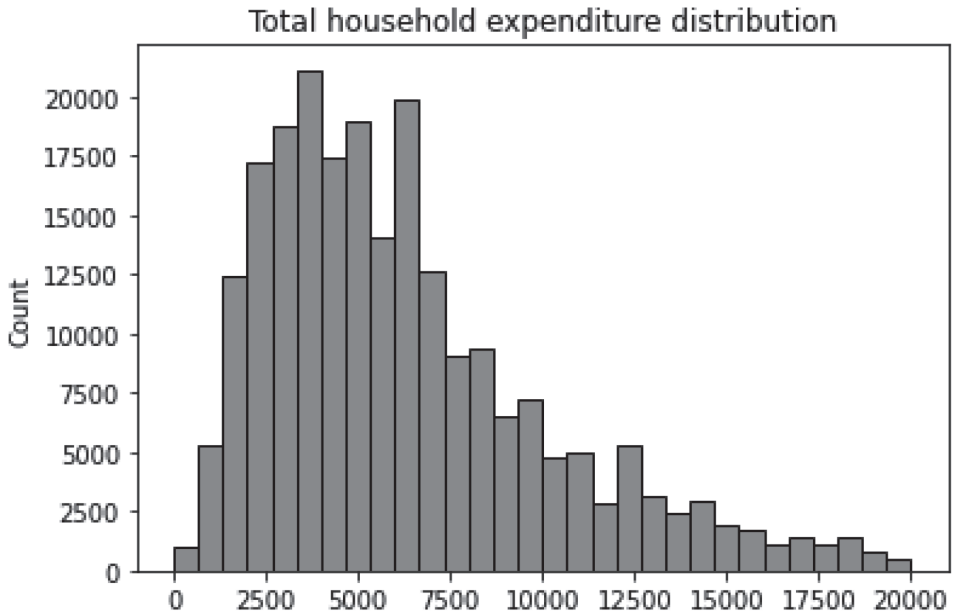
The distribution on *Household net worth*, *Total household expenditures* and *Household net financial assets* are shown in Figure 2, Figure 3 and Figure 4. These distributions show that the data do not follow the normal distribution, but they are right-skewed (positively) distributed. Extreme values can be found far from the peak on the right side. *Total household expenditure* distribution has two peaks, one between 2500 and 5000 euros and one near 6000 euros. Household net financial assets include also negative values (this variable includes household debt). The largest number of households have positive net financial assets, these typically amount to only a few thousand euros.

Figure 2: Household net wealth distribution

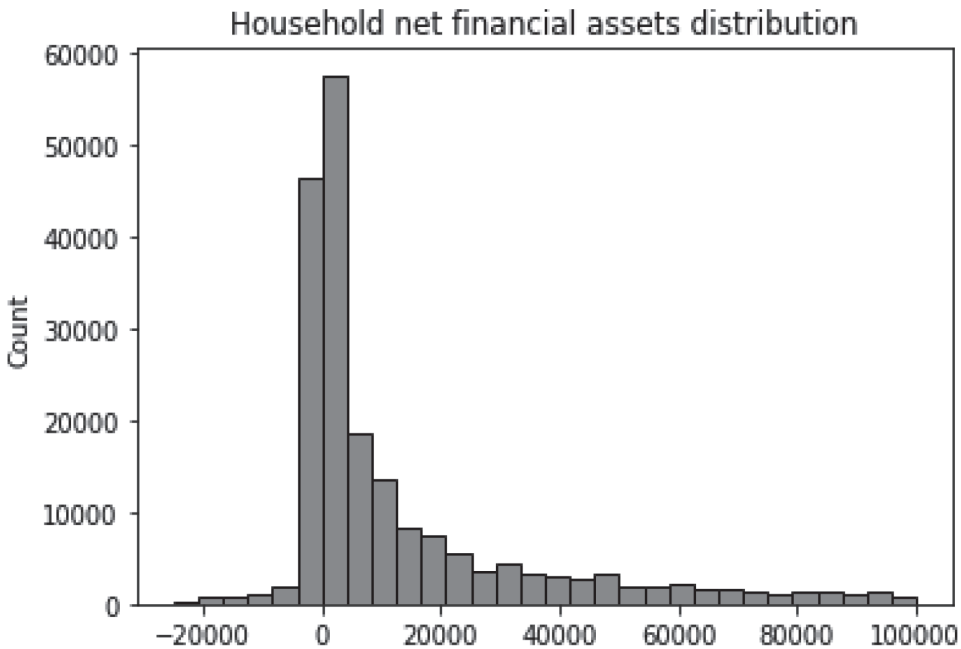


Source: own calculations based on SHARE data

Figure 3: Total household expenditure distribution



Source: own calculations based on SHARE data

Figure 4: Household net financial assets distribution

Source: own calculations based on SHARE data

Table 1, Table 2 and Table 3 show the descriptive statistics on *Household net worth*, *Total household expenditure* and *Household net financial assets* distributed over age cohorts. *Household net worth* descriptive distributed over age groups (Table 1) demonstrates household net worth as a proxy of household wealth. In accordance with the data on savings, the highest average household net worth of 344589 euros was recorded in the age group of 60 to 64 years. The trend observed indicates a decumulation of wealth, as evidenced by the fact that the oldest respondents are situated at the lowest level of wealth.

The expected wealth decumulation rates in old age are between 3 to 6 percent (e.g. Davies, 1981). Our data shows that the average wealth decumulation rate is 12 %. According to our data, wealth accumulation by 18 % occurs in the pre-retirement age (between 55 and 59 and 60 and 64). If we look at the older age groups (65 +), we can already talk about decumulation of their wealth. The biggest dissaving trend among the observed age groups occurs between 75-79 and 80-84 (18 %), and 80-84 and 85-89 (21 %).

Table 1: Descriptive statistics of household net worth

Period	Age group	Sample size	Household net worth			
			Mean	Minimum	Maximum	Standard deviation
Pre-retirement	55-59	22330	292624	-1086377	13627500	571321
	60-64	37850	344589	-1138827	206750140	2461875
Retirement	65-69	45345	333536	-2163618	206750140	2274754
	70-74	43565	308125	-521568	22204689	660998
	75-79	33875	283104	-786743	77518485	689185
	80-84	25240	231782	-383363	18601574	533358
	85-89	13775	182298	-33069	5990004	393893
	90-94	5255	170833	-501538	6067106	330942

Source: own calculations based on SHARE data

In Table 2, descriptive statistics for *Total household expenditure* are presented. Data suggest that consumption is gradually decreasing with age. Data reveals that the highest mean value for total household expenditure is observed in the age group 55-59, while the lowest mean is found in the age group 85-89. Interestingly, there is a noteworthy observation: the total household expenditure for the age group 90-94 is higher compared to all age groups spanning from 70 to 89.

Table 2: Descriptive statistics of household expenditures

Period	Age group	Sample size	Total household expenditure			
			Mean	Minimum ⁴	Maximum	Standard deviation
Pre-retirement	55-59	22330	7269	0	822600	13123
Retirement	60-64	37850	7221	0	63412	5348
	65-69	45345	6890	0	64201	4958
	70-74	43565	6770	0	78468	5222
	75-79	33875	6566	0	101448	5020
	80-84	25240	6426	0	101448	5364
	85-89	13775	6303	0	84073	6050
	90-94	5255	6887	0	94032	7657

Source: own calculations based on SHARE data

⁴ We did not pay attention to zero values for the total household expenditure variable, as there were only 0.2% zero observations out of our sample.

Regarding *Household net financial assets*, those in the 60 to 64 age range have on average the highest financial assets and in contrast to that the lowest financial assets can be seen in the age of 85 to 89 (negative financial assets can be understood as a debt). Even in pre-retirement or retirement age, there are households whose savings are negative, which may be in line with the life cycle theory, and thus with the assumption that funds accumulated during the productive age are spent during retirement to zero or even negative values. However, it could also be a case where households are still paying off their debts from the period when they were part of the labor market. The highest indebtedness among households can be observed between the ages of 60 to 64 and 65 to 69, and the indebtedness decreases at a later age.

Table 3: Descriptive statistics of household net financial assets

Period	Age group	Sample size	Household net financial assets			
			Mean	Minimum	Maximum	Standard deviation
Pre-retirement	55-59	22330	58274	-621205	4387821	168603
	60-64	37850	69099	-2443444	4387821	198581
Retirement	65-69	45345	67625	-2291814	4612079	203779
	70-74	43565	63960	-929472	6042741	206954
	75-79	33875	56499	-793282	3537443	171621
	80-84	25240	44103	-461467	3262942	137761
	85-89	13775	37197	-202995	3800000	142019
	90-94	5255	38348	-654144	3295774	137635

Source: own calculations based on SHARE data

The descriptive statistics of *Household net financial assets* also suggests the life-cycle hypothesis is not accurate in the context of zero or negative savings at the end of an individual's life. Individuals also accumulate positive savings at the end of life, consistent with theories regarding precautionary or bequest motives for saving and some empirical findings, i.e. Blundell et al. (1995) and Mäki-Fränti (2022).

Results reported in Tables 4, 5 and 6 indicate the results on testing the pre-retirement and retirement age groups differences regarding the patterns on household net worth, expenditures, and savings. Our analysis proved the statistically significant differences among the observed age groups in terms

of their wealth, consumption, and savings⁵. Considering the descriptive statistics, our conclusions support the existence of the Retirement Savings Puzzle described by e.g. French, Jones and McGee (2023). We observe a decrease in wealth, consumption, and savings with increasing age which is in line with empirical findings of Ventura and Horioka (2020). We observe statistically significant differences between pre-retirement age and retirement age groups on average in their wealth, consumption or saving patterns. We do not have enough evidence to reject our hypothesis, so we assume that wealth, consumption and saving levels exhibit a statistically significant difference as age progresses, decreasing and reaching their lowest but non-zero values among the oldest individuals.

Table 4: Tests on *Household net worth* in the pre-retirement age group versus the retirement age groups

Retirement age group	Pre-retirement age group			
	55-59		60-64	
	T test (t-statistic)	T Test (p-value)	T test (t-statistic)	T Test (p-value)
90-94	14,87691798	7,26765E-50	-5,109883225	3,23731E-07
85-89	-19,92980545	6,67515E-88	-7,701163112	1,37226E-14
80-84	-12,00821955	3,59307E-33	-7,168401322	7,67073E-13
75-79	-1,712350312	0,086837646	-4,443448678	8,86606E-06
70-74	-2,980021536	0,002883332	-2,970662125	0,002972452
65-69	2,646800021	0,00812762	-0,672180289	0,501470794

Source: own calculations based on SHARE data

⁵ We acknowledge that the application of the t-test and ANOVA requires the assumption of normality, which is not met based on Figures 2, 3, and 4. Consequently, we additionally employed the nonparametric Kruskal-Wallis test to analyze the data. The results of this test support the existence of statistically significant differences among the age groups.

Table 5: Tests on *Total household expenditures* in the pre-retirement age group versus the retirement age groups

Retirement age group	Pre-retirement age group			
	55-59		60-64	
	T test (t-statistic)	T Test (p-value)	T test (t-statistic)	T Test (p-value)
90-94	2,028356672	0,042533448	-3,997796977	6,40411E-05
85-89	-8,121359112	4,75503E-16	-16,64817337	4,53186E-62
80-84	-9,360561069	8,26516E-21	-18,28740328	1,62588E-74
75-79	-8,921003868	4,75606E-19	-16,87549797	9,05227E-64
70-74	6,934575899	4,11179E-12	-12,16677051	5,00136E-34
65-69	-5,412592208	6,23294E-08	-9,264646109	2,00206E-20

Source: own calculations based on SHARE data

Table 6: Tests on *Household net financial assets* in the pre-retirement age group versus the retirement age groups

Retirement age group	Pre-retirement age group			
	55-59		60-64	
	T test (t-statistic)	T Test (p-value)	T test (t-statistic)	T Test (p-value)
90-94	7,965263733	1,71184E-15	-10,86858415	1,76637E-27
85-89	-12,23639241	2,32413E-34	-17,31194949	5,91275E-67
80-84	-10,0810201	7,08351E-24	-17,39947248	1,19877E-67
75-79	-1,208190165	0,226979207	-9,040484723	1,59741E-19
70-74	-3,546034865	0,000391346	-3,600933557	0,000317265
65-69	5,930195648	3,04037E-09	-1,050501172	0,293490804

Source: own calculations based on SHARE data

To test the robustness of our result we test the stability of these results among individual Europe countries. Analysis reported in Table 7 suggested that the differences in wealth, saving and consumption behavior among pre-retirement and retirement age groups of the elderly people are stable on a country level. The selected sample of countries in our dataset is quite wide, and therefore it is important to look at differences in wealth, consumption and savings between individual age groups and at the level of individual countries. Descriptive

statistics of wealth, consumption and savings in single countries can be found in Appendix.

Table 7: Country level analysis

Country	Total household expenditure	Household net financial assets	Household net worth
	ANOVA (F statistic)	ANOVA (F statistic)	ANOVA (F statistic)
<i>Austria</i>	18,00 (6,81153E-24)	13,48 (2,01467E-17)	22,66 (1,33518E-30)
<i>Bulgaria</i>	49,02 (2,00736E-67)	8,41 (3,00897E-10)	21,50 (1,06205E-28)
<i>Belgium</i>	22,78 (7,55629E-31)	21,00 (2,85822E-28)	45,70 (4,08032E-64)
<i>Cyprus</i>	19,05 (5,92983E-25)	3,71 (0,000536334)	12,87 (2,38932E-16)
<i>Czech Republic</i>	87,36 (6,1474E-125)	57,41 (1,71156E-81)	82,89 (1,7866E-118)
<i>Switzerland</i>	8,83 (7,16166E-11)	14,36 (1,07259E-18)	14,02 (3,29427E-18)
<i>Germany</i>	2,01 (0,050077834)	33,83 (4,47777E-47)	24,45 (2,3185E-33)
<i>Denmark</i>	15,85 (7,62996E-21)	51,90 (3,38314E-73)	53,94 (3,74292E-76)
<i>Estonia</i>	94,96 (3,2695E-136)	4,11 (0,000160373)	57,24 (2,22798E-81)
<i>Spain</i>	74,31 (1,7625E-105)	50,71 (1,87613E-71)	35,53 (2,11096E-49)
<i>France</i>	10,53 (2,88745E-13)	7,80 (1,86065E-09)	25,46 (8,5361E-35)
<i>Finland</i>	6,60 (8,69855E-08)	6,07 (4,41175E-07)	7,70 (2,70017E-09)
<i>Greece</i>	97,71 (4,3407E-140)	8,14 (6,35388E-10)	32,98 (7,73217E-46)
<i>Croatia</i>	22,93 (6,92562E-31)	14,87 (2,35711E-19)	11,54 (1,21541E-14)

<i>Hungary</i>	28,08 (6,05611E-38)	11,86 (4,9001E-15)	17,80 (2,05358E-23)
<i>Italy</i>	68,57 (2,86931E-97)	26,63 (1,83504E-36)	20,89 (3,99997E-28)
<i>Israel</i>	4,80 (2,12044E-05)	12,25 (1,29339E-15)	13,52 (2,13069E-17)
<i>Lithuania</i>	40,13 (1,14362E-55)	25,15 (3,83124E-34)	19,07 (2,15246E-25)
<i>Luxembourg</i>	9,39 (1,30887E-11)	1,13 (0,341445676)	8,46 (2,5501E-10)
<i>Latvia</i>	62,97 (6,21606E-86)	12,47 (6,88686E-16)	8,26 (4,98246E-10)
<i>Malta</i>	34,81 (1,99312E-47)	4,34 (8,49862E-05)	29,94 (1,37757E-40)
<i>Netherlands</i>	6,68 (6,46014E-08)	25,34 (1,49811E-34)	24,72 (1,20044E-33)
<i>Poland</i>	58,19 (3,4063E-82)	31,05 (7,34955E-43)	82,84 (1,5855E-117)
<i>Romania</i>	9,33 (1,52216E-11)	3,43 (0,001137461)	1,81 (0,081719303)
<i>Sweden</i>	20,80 (5,14776E-28)	17,71 (1,55219E-23)	51,02 (4,94987E-72)
<i>Slovenia</i>	45,38 (7,24101E-64)	2,00 (0,051012171)	38,04 (3,70176E-53)
<i>Slovakia</i>	16,41 (1,74937E-21)	20,72 (1,34594E-27)	12,51 (5,6598E-16)

Source: own calculations based on SHARE data

5 Conclusion

Researching patterns of wealth, consumption and savings behavior should be in the interest of policymakers, as we face various challenges in the context of an aging population and unsustainably set pension systems. Our results support prior results that the life cycle theory cannot accurately describe what happens to wealth, consumption, and savings in retirement age. Individuals driven by different motives accumulate positive savings at the end of life.

However, in accordance with the life cycle hypothesis we observe that households reduce wealth, consumption, and savings shortly after retirement. Data indicate a wealth decumulation, the oldest respondents are situated at the lowest level of wealth. The rate at which the older age groups decumulate their wealth is on average 12 % that is higher than expected. The biggest dissaving trend among the age groups occurs between 75-79 and 80-84 (18 %), and 80-84 and 85-89 (21 %). Based on the results, there are statistically significant differences between pre-retirement and retirement age groups of the elderly in their wealth, consumption and saving patterns, this applies across European countries. We observed decline in all analyzed variables with increasing age, reaching their lowest but non-zero values among the oldest people.

Potential limitations regarding the existing literature are following: Demery and Duck (2005) mentioned the possible sample selection problem encountered when analyzing savings on household-level. Following Wise (1998) as part of the potential limitations of this paper, survey response biases should also be considered. Empirical research regarding the consumption and savings of individuals or households is mostly based on the results of surveys. Response bias in surveys has the potential to result in unreliable estimates of the consumption and savings habits of the elderly. The authors pinpoint various cognitive and motivational factors that may contribute to biased survey responses such as question ambiguity, confidentiality, strategic misrepresentation, imperfect knowledge, and psychometric bias (e.g., anchoring effect).

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REFERENCES

- [1] Bhutta, N., Bricker, J., Chang, A. C., Dettling, L. J., Goodman, S., Hsu, J. W., Moore, K. B., Reber, S., Volz, A. H., & Windle, R. A. (2020). Changes in U.S. Family Finances from 2016 to 2019: Evidence from the Survey of Consumer Finances. *Federal Reserve Bulletin*, 106(5), 1 – 42. <https://doi.org/10.17016/bulletin.2020.106>
- [2] Blundell, R., Banks, J., & Tanner, T. (1995). Is there a retirement-savings puzzle? Working Paper Series. <https://doi.org/10.1920/wp.ifs.1995.9504>
- [3] Davies, J. B. (1981). Uncertain Lifetime, Consumption, and Dissaving in Retirement. *Journal of Political Economy*, 89(3), 561 – 577. <https://doi.org/10.1086/260986>
- [4] Demery, D., & Duck, N. W. (2005). Savings–age profiles in the UK. *Journal of Population Economics*, 19(3), 521 – 541. <https://doi.org/10.1007/s00148-005-0039-6>
- [5] French, E., Jones, J. B., & McGee, R. (2023). Why Do Retired Households Draw Down Their Wealth So Slowly? *Journal of Economic Perspectives*, 37(4), 91 – 113. <https://doi.org/10.1257/jep.37.4.91>
- [6] Hurd, M. D. (1990). Research on the Elderly: Economic Status, Retirement, and Consumption and Saving. *Journal of Economic Literature*, 28(2), 565 – 637. <https://www.jstor.org/stable/2727265>
- [7] IFP. (2010). Miera úspor na Slovensku. Available at: https://www.mfsr.sk/files/archiv/priloha-stranky/19989/57/EA19_Miera_uspor_SR.pdf
- [8] Mankiw, G. (2010). *Macroeconomics* (7th Ed.). New York: Worth Publishers.
- [9] Mäki-Fränki, P. (2022). The effects of age and cohort on household saving (No. 6/2022). *BoF Economics Review*.
- [10] OECD (2021). *Inheritance Taxation in OECD Countries*. OECD Tax Policy Studies. <https://doi.org/10.1787/e2879a7d-en>
- [11] Oinonen, S., & Viren, M. (2022). Why do households save. <https://www.suerf.org/suer-policy-brief/38993/why-do-households-save>
- [12] Ventura, L., & Horioka, C. Y. (2020). The Wealth Decumulation Behavior of the Retired Elderly in Italy: The Importance of Bequest Motives and Precautionary Saving. National Bureau of Economic Research. <https://doi.org/10.3386/w26986>
- [13] Wise, D. A. (1998). *Frontiers in the Economics of Aging*. <https://doi.org/10.7208/chicago/9780226903231.001.0001>

Appendix

Appendix 1: Descriptive statistics of wealth, consumption and savings in single countries

country	Total household expenditure			
	mean	min	max	std
Austria	8592	0	31890	4409
Belgium	8886	0	57600	4742
Bulgaria	2823	0	11640	1742
Croatia	3726	0	11913	1879
Cyprus	7404	600	42000	5197
Czechia	3852	0	19051	2001
Denmark	8780	0	31392	5009
Estonia	4956	0	21600	2760
Finland	7922	1579	822600	24870
France	7550	0	32400	3980
Germany	8491	0	36000	4367
Greece	5193	0	36000	3168
Hungary	2444	342	9771	1361
Israel	11508	0	65117	6135
Italy	6979	0	27600	3428
Latvia	3041	0	8400	1515
Lithuania	4588	0	26400	3995
Luxembourg	14030	0	37800	6570
Malta	7702	0	21817	3148
Netherlands	8454	0	46080	4905
Poland	3209	0	9993	1430
Romania	2559	0	10417	1518
Slovakia	5234	960	48000	5083
Slovenia	4920	0	15360	2136
Spain	7006	0	35016	3382
Sweden	6727	0	23062	3861
Switzerland	16828	0	101448	10713

country	Household net financial assets			
	mean	min	max	std
Austria	36682	-79880	660718	65811
Belgium	130482	-146957	2138032	196188
Bulgaria	685	-12155	15339	2197
Croatia	2923	-33164	106654	9899
Cyprus	12190	-400000	262041	48887
Czechia	12701	-59632	451126	22510
Denmark	206267	-189044	6042741	382359
Estonia	4246	-31935	333109	12451
Finland	85080	-177500	2120982	173324
France	58563	-98545	856382	97285
Germany	64952	-94152	1137500	108324
Greece	2937	-60000	121961	10122
Hungary	2053	-5694	56940	5858
Israel	123637	-89154	2254257	283693
Italy	21809	-50000	1292088	76578
Latvia	687	-10640	22461	2049
Lithuania	3837	-49000	75345	8066
Luxembourg	159111	-283759	4612079	377650
Malta	25415	-14300	440000	50144
Netherlands	84666	-116002	2425000	200239
Poland	3563	-30000	128292	9029
Romania	192	-6407	11368	1190
Slovakia	6831	-10000	310698	14751
Slovenia	6461	-99000	314820	17498
Spain	24870	-150000	840298	53970
Sweden	143732	-304463	2403310	238674
Switzerland	296105	-2443444	4432061	442920

country	Household net worth			
	mean	min	max	std
Austria	256267	-79304	3586377	400509
Belgium	441331	-44300	3928242	375235
Bulgaria	21166	-10226	124838	18713
Croatia	78455	-43525	565782	69694
Cyprus	261870	-383363	3559399	399892
Czechia	101592	-38141	1281050	116013
Denmark	513369	-405539	6736343	660273
Estonia	97536	-64398	4899880	169952
Finland	373124	-161870	8049467	565987
France	321435	-56218	4505947	321619
Germany	296902	-169537	4973557	386030
Greece	102070	-67000	627266	89881
Hungary	39675	-1708	349858	35374
Israel	694717	-84059	10341603	994840
Italy	194776	-67980	2478584	186662
Latvia	20188	-82591	257000	27180
Lithuania	47928	-1700	360000	48623
Luxembourg	1292045	-108146	13299840	1139090
Malta	313888	0	1620949	290991
Netherlands	322849	-180500	6588549	441658
Poland	55156	-18164	552343	61950
Romania	515149	-6201	206750140	8566737
Slovakia	85804	-2113	781954	64545
Slovenia	143106	-3500	1411821	146255
Spain	208049	-850544	3454471	212954
Sweden	499438	-302556	5871163	546025
Switzerland	1027269	-2163618	22204689	1735037

Source: own calculations based on SHARE data