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Charles Yuji Horioka
Luigi Ventura

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Why Do Europeans Save? Micro-Evidence from the Household Finance and Consumption Survey

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ABSTRACT

We analyze the saving motives of European households using micro-data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank. We find that the rank ordering of saving motives differs greatly depending on what criterion is used to rank them. For example, we find that the precautionary motive is the most important saving motive of European households when the proportion of households saving for each motive is used as the criterion to rank them but that the retirement motive is the most important saving motive of European households if the quantitative importance of each motive is taken into account. Moreover, the generosity of social safety nets seems to affect the importance of each saving motive, with saving for the retirement motive being less important in countries with generous public pension benefits and saving for the precautionary motive being less important in countries with generous health systems. These findings suggest that the retirement motive and the precautionary motive are the dominant motives for saving in Europe partly because social safety nets are not fully adequate. Finally, our findings suggest that the selfish life-cycle model is more applicable in Europe than is the altruism model.

Charles Yuji Horioka
Research Institute for Economics
and Business Administration
Kobe University
2-1, Rokkodai, Nada
Kobe 657-8501
JAPAN
and NBER
horioka@rieb.kobe-u.ac.jp

Luigi Ventura
Department of Economics and Law
Sapienza, University of Rome
Rome
Italy
luigi.ventura@uniroma1.it

1. Introduction

One of the key variables in economics is saving, and what is important is not just the amount of saving households do but also *why* households save (i.e., the relative importance of the various motives for which households save). Nonetheless, although a voluminous amount of work has been done on the determinants of the amount of saving, relatively little work has been done on why households save. This paper attempts to fill this gap in the literature by analyzing the saving motives of European households using micro-data from the Household Finance and Consumption Survey (hereafter referred to as HFCS), a large-scale household survey that is conducted periodically by the European Central Bank.

To summarize our main findings, we find that the rank ordering of saving motives differs greatly depending on what criterion is used to rank them. For example, we find that the precautionary motive is the most important saving motive of European households when the proportion of households saving for each motive is used as the criterion to rank them but that the retirement motive is the most important saving motive of European households if the quantitative importance of each motive is taken into account. Moreover, the generosity of social safety nets seems to affect the importance of each saving motive, with saving for the retirement motive being less important in countries with generous public pension benefits and saving for the precautionary motive being less important in countries with generous health systems. These findings suggest that the retirement motive and the precautionary motive are the dominant motives for saving in Europe partly because social safety nets are not fully adequate.

Our finding that saving motives that are consistent with the selfish life-cycle model as well as saving motives that are consistent with the altruism model are important in Europe implies that the two models coexist in Europe (i.e., that both types of households coexist and/or that both models coexist within the same household in Europe), as is the case in other parts of the world (see section 2). However, our finding that the retirement motive, which is the saving motive that most exemplifies the selfish life-cycle model, is of dominant importance in Europe strongly suggests that this model is far more applicable in Europe than is the altruism model. Moreover, our finding that the intergenerational transfers motive, which is the saving motive that most exemplifies the altruism model, accounts for only about one-quarter of household wealth in Europe provides further corroboration for this finding.

The remainder of this paper is organized as follows: In section 2, we discuss theoretical considerations; in section 3, we survey the previous literature on saving motives; in section 4, we discuss the estimation model used in the econometric analysis; in section 5, we discuss the data source and sample selection; in section 6, we present descriptive statistics; in section 7, we present the estimation results concerning the determinants of the household wealth-to-income ratio; in section 8, we present our estimates of the composition of household wealth by motive; in section 9, we conduct a number of robustness checks; and in section 10, we present a summary, conclusions, and policy implications.

2. Theoretical Considerations

The simplest version of the selfish life-cycle model with no borrowing constraints and no uncertainty predicts that households should be saving primarily for living expenses during

retirement and that they should not be saving to leave intergenerational transfers (i.e., bequests and *inter vivos* transfers) to their children. By contrast, if the altruism model applies and parents harbor intergenerational altruism towards their children, households should be saving not only for living expenses during retirement but also to leave intergenerational transfers to their children. Furthermore, if households face borrowing constraints, they should also be saving in preparation for the purchase of large-ticket items such as housing and consumer durables (because they know that they will not be able to debt-finance such purchases). Finally, if households face borrowing constraints as well as various sources of uncertainty, they should also be saving for precautionary purposes because they know that they will not be able to borrow when unexpected contingencies arise. Indeed, there is a voluminous literature on precautionary saving, with theoretical papers tending to find that precautionary saving should be important but empirical papers tending to find that it is not very important quantitatively (see, for example, the excellent survey in Jappelli and Pistaferri, 2017). Thus, assessing the relative importance of the various motives for which households save will shed light on which model of household behavior applies in the world and on which assumptions concerning the behavior of households and the environment facing households apply in the real world.

3. Survey of the Previous Literature on Saving Motives

In this section, we survey previous studies that have attempted to assess the relative importance of various motives for saving and consider whether the findings are consistent with the selfish life-cycle model, the altruism model, or both (see Horioka, 2021, for a more detailed discussion).

Horioka and Watanabe (1997) and Horioka, et al. (2000) conduct comprehensive analyses of saving motives in Japan and the United States using data from the Survey of the Financial Asset Choice of Households and the U.S.-Japan Comparison Survey of Saving, respectively. Both of these surveys were conducted by the former Institute of Posts and Telecommunications Policy of the former Ministry of Posts and Telecommunications of the Japanese Government, and both are unique in asking respondents to provide information on the amount of saving, dissaving, new borrowings, and loan repayments for each motive. Horioka and Watanabe (1997) and Horioka, et al. (2000) analyze these data and obtain broadly consistent results for both Japan and the United States. For example, Horioka and Watanabe (1997) find that the retirement motive ranks second (behind the precautionary motive) at 55.4% if the proportion of households saving for each motive is used as the criterion to rank them and ranks first (at 62.5%) if the share of saving for each motive in total (net) household saving is used as the criterion to rank them. Since the retirement motive is the saving motive that most exemplifies the selfish life-cycle model, these findings strongly suggest that the selfish life-cycle model is highly applicable in both Japan and the United States.

The saving motive that most exemplifies the altruism model is the bequest motive, and looking at the results for this motive, Horioka and Watanabe (1997) find that, in Japan, the bequest motive ranks 10th out of 12 (at 2.3%) if the proportion of households saving for each motive is used as the criterion to rank them and ranks 5th (at 3.2%) if the share of saving for each motive in (net) household saving is used as the criterion to rank them.

These results suggest that the selfish life-cycle model is much more applicable than the altruism model in both Japan and the United States. It should be noted that saving for one children's education and marriage expenses involve intergenerational transfers from parents to children so that they should be regarded as being consistent with the altruism model, but even if they are taken into account, the life-cycle model remains far more applicable than the altruism model in both countries (see Horioka, et al., 2000)

The literature on the importance of different saving motives is surveyed in detail in Horioka (2021), and as discussed by Horioka (2021), Gourinchas and Parker (2002), Schunk (2009), Birkeland (2013), and Chao et al. (2011) analyze saving motives in the United States, Germany, the Netherland, and China, respectively, and Yao et al. (2011) conduct a U.S.-China comparison of saving motives.

In addition, some authors have analyzed saving for specific motives. For example, Ginama (1988) and Ogawa (1991) analyze precautionary saving, Horioka (1985) analyzes saving for one's children's educational expenses, Horioka (1987) and Grossbard (2015) analyze saving for one's children's marriage expenses, Horioka (1988) analyzes saving for housing purchase, and Horioka and Okui (1999) analyze saving for retirement.

The findings of previous studies generally support the selfish life-cycle model because they show that saving for motives that are consistent with the selfish life-cycle model such as the retirement motive are much more important than saving for motives that are consistent with the altruism model such as the bequest motive in Japan as well as in other countries. However, previous studies also indicate that there are substantial differences among countries in the relatively importance of various saving motives, with motives relating to the selfish life-cycle model being relatively more important in Japan (and perhaps also in China and the Netherlands) than they are in the United States and Germany (see Horioka, 2021, for more details).

The current paper is closest in spirit to Horioka and Watanabe (1997) and Horioka, et al. (2000), but it makes an original contribution by analyzing saving motives in the major European countries and comparing the results to those for other countries. Moreover, the current paper makes a further contribution by analyzing the determinants of saving for individual motives with emphasis on the impact of the generosity of social safety nets such as public pension and health systems. Finally, the current paper makes yet another contribution by analyzing the share of saving for individual motives in a stock measure of saving as well as in a flow measure of saving.

4. Estimation Model

In this section, we explain the estimation model we use to estimate the quantitative importance of individual motives for saving.

Following Guiso et al. (1992), Carroll and Samwick (1995), Kazarosian (1997) and others, our dependent variable is the natural logarithm of the wealth-to-income ratio, defined as the ratio of household net worth to annual household income, where household net worth is defined as the sum of financial and non-financial assets minus liabilities.

The key explanatory variables we use are dummy variables for each of 11 saving motives: the housing purchase motive (the wording in the survey is "to buy a home"), the other major purchase motive, the business motive ("to start a business"), the financial asset motive, the precautionary motive ("for unexpected events"), the retirement motive ("for old age needs"), the debt repayment motive, the travel/holidays motive, the *inter vivos* transfers motive ("to support children and grandchildren"), the bequest motive, and the government subsidy motive ("to profit from government subsidies"). Since the dependent variable is in log form, the coefficient of the dummy variable for a given saving motive indicates the percentage amount by which the wealth-to-income ratio of a household saving for that motive exceeds the wealth-to-income ratio of an otherwise identical household not saving for that motive.

Finally, we include a number of variables such as age, age squared, dummy variables pertaining to educational attainment, a dummy variable for being male, household size, dummy variables pertaining to marital status, and a dummy variable for homeownership as control variables and country dummies to control for unobserved heterogeneity.

5. The Data Source and Sample Selection

In this paper, we use micro-data from the Household Finance and Consumption Survey (hereafter referred to as HFCS), which is conducted by the European Central Bank. The HFCS collects detailed information on the assets, liabilities, income, consumption, and saving motives of households, and hence it is ideally suited to an analysis of household saving motives.

The survey is based on 84,000 interviews conducted in 18 euro area countries, as well as Poland and Hungary. The first (2010) wave of the survey was conducted in 2010-11, the second (2014) wave in 2013-15, the third (2017) wave in 2017, and the fourth (2021) wave in 2020-22. More detailed information on this survey can be found at https://www.ecb.europa.eu/stats/ecb_surveys/hfcs/html/index.en.html

We use the data from the third (2017) wave of the survey for our analysis. The 19 countries included in our estimation sample were Austria, Belgium, Croatia, Cyprus, Estonia, Finland, Germany, Greece, France, Hungary, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Slovakia, and Slovenia (Austria is the reference country).

Turning to sample selection, we dropped all observations with missing values for any of the variables used in our analysis. In addition, we dropped all observations for respondents who did not circle any saving motives because it is implausible that they are not saving for any motive even though they have positive wealth. Furthermore, we also dropped all observations for responses who circled more than 6 saving motives because there are substantial differences among countries in the average number of saving motives circled, ranging from 1.59 in Finland to 4.02 in Lithuania, and in the maximum number of saving motives circled, ranging from 3 in Italy to 12 in Hungary, Lithuania, and Slovenia.

In addition, we dropped all observations for which the wealth-to-income ratio is more than 100 because these are primarily respondents with very low incomes, which causes their wealth-to-income ratios to be unusually high.

Overall, our regression sample includes about 36,000 observations.

6. Descriptive Statistics

Tables 1-3 show the descriptive statistics for the variables used in the econometric analysis for the full sample, the under-60 sample, and the 60-or-older sample, respectively. Looking first at the results for saving motives for the full sample, if saving motives are ranked by the proportion of respondents saving for each motive, the precautionary motive is by far the top saving motive, with 63.1% of respondents saving for this motive. The retirement motive ranks second, with 43.9% of respondents saving for this motive, followed by the *inter vivos* transfers motive in third place (25.1%), the travel/holidays motive (25.0%) in fourth place, the major purchases motive in fifth place (17.8%), and the bequest motive in sixth place (10.7%). Looking next at the results for the under-60 and 60-or-older samples, they are broadly similar to those for the full sample, but with significant differences that reflect differences in life stage. For example, the *inter vivos* transfers motive, the travel/holidays motive, the major purchases motive, and the housing purchase motive are more important for younger respondents, whereas the retirement and bequest motives are more important for older respondents. For example, the proportion of respondents saving for the retirement motive is only 36.6% in the under-60 sample but a full 53.3% in the 60-or-older sample, which is not surprising because one would expect respondents to become more and more concerned about life after retirement as they age (this finding is consistent with the findings of Horioka and Watanabe, 1997, and Gourinchas and Parker, 2002). Also, the proportion of respondents saving for the *inter vivos* transfers motive declines with age, whereas the proportion of respondents saving for the bequest motive increases with age, which is not surprising because one would expect the form of transfers from parents to children to shift from *inter vivos* transfers to bequests as the respondent ages.

The detailed results are not shown due to space limitations, but we calculated a correlation matrix among saving motives and found that correlations among saving motives were surprisingly low. Thus, multicollinearity among the saving motive dummies is presumably not a problem, implying that we can measure the contribution of each motive to wealth accumulation with some precision.

If we look at the results for individual countries (not shown), the precautionary motive is the top saving motive in virtually all countries in the sample. The ranking of the other saving motives differs greatly from country to country, but in most countries, the next three most important saving motives are the retirement motive, the *inter vivos* transfers motive, and the travel/holidays motive, although the rank order of these motives differs greatly from country to country.

However, just because the proportion of households who are saving for a given motive is large does not necessarily mean that this motive is important quantitatively. It all depends on whether the amounts of saving being done for that motive are large or small. It is to this issue that we turn in our econometric analysis.

Finally, the mean of the wealth-to-income ratio is 6.84, which indicates that the average respondent's wealth (net worth) is almost seven times his or her annual income.

7. Estimation Results concerning the Determinants of the Wealth-to-Income Ratio

The estimation results concerning the determinants of the wealth-to-income ratio for the full sample, the under-60 sample, and the 60-or-older sample are shown in Tables 4-6, respectively. Looking first at the results for the full sample in Table 4, all of the coefficients of the saving motive dummies, except for those relating to the other major purchases, precautionary, and travel/holidays motives are positive and statistically significant. The business motive dummy has the largest coefficient (0.515), which implies that, *ceteris paribus*, those saving to start a business have wealth-to-income ratios that are a full 51.5% higher than the wealth-to-income ratios of those who are not saving for this motive. This result is not surprising because starting a business typically requires a considerable investment. Moreover, the dummies of the retirement, financial asset, and housing purchase motives have the next largest coefficients (0.200, 0.196, and 0.195, respectively), which implies that, *ceteris paribus*, those who are saving for these motives have wealth-to-income ratios that are a full 20.0%, 19.6%, and 19.5% higher, respectively, than the wealth-to-income ratios of those who are not saving for these motives. Moreover, the dummy for the bequest and *inter vivos* transfers motives also have relatively large coefficients (0.179 and 0.098, respectively), which implies that, *ceteris paribus*, those who are saving for these motives have wealth-to-income ratios that are 17.9% and 9.8% higher, respectively, than the wealth-to-income ratios of those who are not saving for these motives.

Looking next at the estimation results for the under-60 sample in Table 5 and those for the 60-or-older sample in Table 6, they are broadly consistent with one another as well as with the results for the full sample in Table 4 with respect to significance levels, magnitudes, and rank order, but the magnitudes of the coefficients of the dummies for all of the major saving motives are higher for the under-60 sample than they are for the 60-or-older sample.

These results contrast sharply with the results in the previous section pertaining to the proportion of respondents saving for each motive. For example, the precautionary, *inter vivos* transfers, travel/holidays, and other major purchase motives rank relatively high when the motives are ranked by the proportion of respondents saving for each motive but not when the motives are ranked by the quantitative importance of each motive because the proportion of respondents saving for these motives is relatively large whereas the amounts involved are relatively small. Conversely, the business, financial asset, and bequest motives rank relatively high when the motives are ranked by the quantitative importance of each motive but not when the motives are ranked by the proportion of respondents saving for each motive because the proportions of respondents saving for theses motives are relatively small whereas the amounts involved are relatively large. Finally, the retirement motive ranks high regardless of which criterion is used to rank the motives because the proportion of respondents saving for this motive as well as the amounts involved are relatively large.

Turning to the estimation results for the other explanatory (control) variables, the coefficients of age and age-squared are positive and negative, respectively, and statistically significant in the full and 60-or-older samples, implying that the impact of age on the wealth-to-income ratio has an inverted U-shape, as expected. As for the impact of educational attainment, the wealth-to-income ratio tends to monotonically increase with educational attainment in all samples. Moreover, the coefficient of the male dummy is positive and statistically significant in the full sample and the 60-or-older sample, suggesting that male-headed households save more, *ceteris paribus*, than female-headed households. Household size and homeownership have a negative and positive impact, respectively, on the wealth-to-income ratio, while marital status hardly ever has a significant impact on the wealth-to-income ratio. Finally, the coefficients of the

country dummies (not reported in the tables) are all statistically significant, pointing to a large degree of heterogeneity across countries.

Overall, the estimation results are highly satisfactory, with the majority of the explanatory variables having coefficients that are statistically significant with the expected signs.

8. The Composition of Household Wealth by Saving Motive

In this section, we present estimates of the share of household wealth for each saving motive in total household wealth, which is the most comprehensive measure of the importance of each saving motive. This measure can be calculated as the proportion of households saving for each motive, taken from Tables 1-3, multiplied by the share of wealth for each motive in total wealth for households saving for that motive, and normalized so that the shares for all motives sum to 100. The latter can be proxied for by the coefficient of the dummy variable for each motive in the wealth-to-income ratio regressions in Tables 4-6 because this coefficient can be interpreted as the percentage change in the wealth-to-income ratio that is attributable to that motive.

The results are shown in Tables 7-9 for the full sample, the under-60 sample, and the 60-or-older sample, respectively. Looking first at the results for the full sample in Table 7, the retirement motive is by far the most important motive for saving with a share of more than one-half (53.8%). The *inter vivos* transfers motive ranks second, with a share of 15.1%, followed by the housing purchase motive in third place (12.4%), the bequest motive in fourth place (11.7%), and the precautionary motive in fifth place (9.3%). All other motives are far less important with a share of less than 5% or less.

Looking next at the results broken down by age in Tables 8 and 9, the retirement motive is the most important motive for saving in both the under-60 and 60-or-older samples, but its share is higher in the 60-or-older sample than in the under-60 sample (61.1% vs. 48.2%). The share of the bequest motive is also larger in the 60-or-older sample than in the under-60 sample (16.5% vs. 8.0%, respectively). By contrast, the share of the *inter vivos* transfers motive is larger in the under-60 sample than in the 60-or-older sample (19.7% vs.10.5%). The reversal in the ordering of the *inter vivos* transfers motive and the bequest motive in the two samples is not surprising given that bequests are, by definition, left later in life than *inter vivos* transfers, and the increase in the importance of the retirement motive with age is also as expected.

Since the selfish life-cycle model assumes that the primary motive for saving is for retirement, our finding that the share of saving for the retirement motive accounts for more than half of total saving in the full sample implies that the selfish life-cycle model is highly applicable in the case of Europe.

Conversely, since it is primarily the saving motives relating to intergenerational transfers (the *inter vivos* transfers motive and the bequest motive) that are consistent with the altruism model, our finding that the combined share of saving for these motives accounts for just over one-quarter (26.8%) of total saving in the full sample implies that the altruism model is applicable to some extent but not of dominant importance in the case of Europe. Moreover, it is possible that a part of these intergenerational transfers is motivated by selfish or strategic considerations à la Bernheim, Shleifer, and Summers (1985) (for example, by a desire to induce one's children to provide care and attention during old age) and that the share of saving that is consistent with the altruism model is even lower than suggested by the aforementioned figure. Thus, although

the selfish life-cycle model and the altruism model appear to coexist in the case of Europe, the selfish life-cycle model seems to be far more applicable than the altruism model.[1]

9. Robustness Checks

In this section, we discuss a number of robustness checks that we conducted.

9.1. Results based on Subsamples of Respondents

In this subsection, we report the results of analyses of the determinants of the wealth-to-income ratio for various subsamples in order to try to shed light on what determines how important each saving motive is.

The Eurostat data base includes data on aggregate pension replacement ratios for all European countries (see https://ec.europa.eu/eurostat/databrowser/view/ILC_PNP3/default/table?lang=en), and as these data show, pension replacement rates were above the median in Austria, Cyprus, Finland, France, Hungary, Italy, Luxembourg, Netherlands, Portugal, and Slovakia. Table 10 shows the descriptive statistics for respondents from countries with relatively generous public pension benefits, and as can be seen from this table, the proportion of respondents saving for the retirement motive is 42.6%, which is slightly lower than it is for the full sample (43.9%). This is as expected because those who expect to receive more generous public pension benefits should be less likely to be saving for the retirement motive. Moreover, the proportions of those saving for the other 10 motives are also very similar in the full sample and the sample of respondents from countries with relatively generous pension benefits.

Table 11 shows the estimation results concerning the determinants of the wealth-to-income ratio for the sample of respondents from countries with relatively generous public pension benefits, and as this table shows, the coefficient of the dummy for the retirement motive for this sample is 0.149, which is more than 25% less than the corresponding figure for the full sample (0.200). This result is as expected because those from countries with relatively generous public pension benefits should be saving less for the retirement motive than those from other countries. However, the coefficients of the dummies for the other saving motives are roughly comparable in the full sample and the sample of respondents from countries with relatively generous public pension benefits.

Table 12 shows the composition of household wealth by saving motive for the sample of respondents from countries with relatively generous public pension benefits, and as can be seen from this table, the share of the retirement motive is 43.2%, which is almost 20% less than the corresponding figure for the full sample (53.7%). Thus, for respondents from countries with relatively generous public pension benefits, the proportion of respondents saving for the retirement motive is only slightly less than that for the full sample, but the quantitative

[1] Saving for one children's education expenses and marriage expenses also involve intergenerational transfers, and they were found to be of some importance in Japan and (to a lesser extent) the United States (see Horioka and Watanabe, 1997, and Horioka, et al., 2000), but the survey we use for the current paper does not ask explicitly about saving for these motives and it is presumably included in saving for the *inter vivos* transfers motive.

importance of the retirement motive is far less than for the full sample, as a result of which the share of saving for the retirement motive in household wealth is much smaller than in the full sample. This finding is as expected since saving for the retirement motive should be less important in countries with more generous public pension benefits and conversely.

The detailed results will not be discussed due to space limitations, but we conducted a parallel analysis for countries with generous health systems (defined as countries whose public spending for inpatient and outpatient medical care as a percentage of total health spending is higher than the median) and obtained similar findings. In particular, we found that, for respondents from countries with relatively generous health systems, the proportion of respondents saving for the precautionary motive is somewhat less than that for the full sample and that the quantitative importance of the precautionary motive is far less than for the full sample, as a result of which the share of saving for the precautionary motive in household wealth is much smaller than in the full sample. This finding is as expected since saving for the precautionary motive should be less important in countries with more generous health systems and conversely.

9.2. Results based on the Accumulation Rate of Net Financial Wealth

Whereas in our benchmark econometric analysis in section 7, we analyzed the determinants of the wealth-to-income ratio, which is a stock measure, in this subsection, we conduct an econometric analysis of the determinants of the accumulation rate of net financial wealth (the change in net financial wealth divided by initial net financial wealth, which is a flow measure) during the three-year period between the second (2014) wave and the third (2017) wave[2]. Note that net financial wealth is defined as holdings of financial assets minus liabilities and that the change in net financial wealth includes out-of-pocket saving as well as changes in asset values (i.e., capital gains and losses) because of the way it was calculated. When calculating the change in net financial wealth, we convert nominal figures to real terms using the consumer price index. We include the same explanatory variables we included in our econometric analysis of the determinants of the wealth-to-income ratio.

The estimation results are shown in Table 13, and focusing first on the coefficients of the saving motive dummies, which can be interpreted as the amount by which the accumulation rate of net financial wealth of those saving for a given motive exceeds that of those not saving for that motive, the dummy for the housing purchase motive has the largest coefficient, following by the coefficients of the dummies for the travel/holidays motive, the *inter vivos* transfers motive, the retirement motive, the government subsidy motive, and the precautionary motive. The bequest motive dummy has a negative coefficient, but this could be due to the fact that bequests tend to be left in the form of housing, which is excluded from the dependent variable that we use in this section.[3]

[2] Although the actual time between two consecutive interviews was variable across households in different countries, we converted the accumulation rate of net financial wealth for each household to a three-year rate to achieve comparability.

[3] We were not able to include the change in the value of housing wealth partly because we were not able to estimate the change in the price of housing across countries.

Recall from our discussion in section 7 that the results of the econometric analysis of the determinants of the wealth-to-income ratio, in which the coefficients of the saving motive dummies can be interpreted as measures of the quantitative importance of the amount of wealth for each saving motive, showed that the dummy for the business motive had the largest coefficient, followed by the coefficients of the dummies for the business motive, the financial assets motive, the housing purchase motive, the bequest motive, the government subsidy motive, and the *inter vivos* transfers motive (see Table 4).

The results in Table 4 pertain to the stock of wealth for each motive whereas the results in Table 13 pertain to the accumulation rate of net financial wealth for each motive, and thus it is not surprising that the ranking of saving motives varies greatly between the two tables, with saving motives with longer time horizons such as the retirement motive and the bequest motive being more important when it comes to the stock of wealth and saving motives with shorter time horizons such as the housing purchase motive and the travel/holidays motive being more important when it comes to a flow measure of wealth accumulation.

Two other things to note are that the wealth accumulation regressions reinforce our earlier findings that the retirement motive and the *inter vivos* motive are important and show that the precautionary motive has a statistically significant impact even though it was not significant in the wealth-to-income ratio regressions.

As for the impact of other explanatory (control) variables, only the coefficients of the variables pertaining to educational attainment and marital status are statistically significant, with single respondents and married respondents showing a higher accumulation rate of net financial wealth than that of other respondents.

10. Summary, Conclusions, and Policy Implications

In this paper, we analyzed the saving motives of European households using micro-data from the Household Finance and Consumption Survey (HFCS), a large-scale household survey that is conducted periodically by the European Central Bank.

To summarize our main findings, we found that the rank ordering of saving motives differs greatly depending on what criterion is used to rank them. For example, we found that the precautionary motive is the most important saving motive of European households when the proportion of households saving for each motive is used as the criterion to rank them but that the retirement motive is the most important saving motive of European households if the quantitative importance of each motive is taken into account. Moreover, the generosity of social safety nets seems to affect the importance of each saving motive, with saving for the retirement motive being less important in countries with generous public pension benefits and saving for the precautionary motive being less important in countries with generous health systems. These findings suggest that the retirement motive and the precautionary motives are the dominant motives for saving in Europe partly because social safety nets are not fully adequate.

Our finding that saving motives that are consistent with the selfish life-cycle model as well as saving motives that are consistent with the altruism model are important in Europe implies that the two models coexist in Europe (i.e., that both types of households coexist and/or that both models coexist within the same household in Europe), as is the case in other parts of the world

(see section 3). However, our finding that the retirement motive, which is the saving motive that most exemplifies the selfish life-cycle model, is of dominant importance in Europe strongly suggests that this model is far more applicable in Europe than is the altruism model. Moreover, our finding that the intergenerational transfers motive, which is the saving motive that most exemplifies the altruism model, accounts for only about one-quarter of total household wealth in Europe provides further corroboration for this finding.

Turning to the policy implications of our findings, our finding that the retirement motive is so important in Europe and our finding that the generosity of public pension benefits affects the amount of saving for the retirement motive suggests that it may be desirable to improve public pension benefits for the elderly (and also other social safety nets for the elderly such as public health insurance and public long-term care insurance) in countries where they are inadequate. Similarly, our finding that the precautionary motive is so important in Europe and our finding that the generosity of the health system affects the importance of precautionary saving suggests that it may be desirable to improve health systems in countries where they are inadequate.

Second, our finding that the bequest and *inter vivos* transfers motives are of some importance in Europe suggests that wealth disparities are, to some extent, passed on from generation to generation via bequests and *inter vivos* transfers and that it might be desirable for governments to introduce and/or to raise estate, gift, and/or wealth taxes as a way of alleviating this tendency.

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Table 1: Descriptive Statistics (Full Sample)					
Variable	Mean	Std. Dev.	Median	Minimum	Maximum
Wealth/Income	6.843	8.368	4.441	0	74.976
Log(Wealth/Income)	1.171	1.524	1.491	-10.643	4.317
Age	56.301	15.853	57	16	85
Age^2/100	34.211	17.850	32.49	2.56	72.25
Primary education	0.147	0.354	0	0	1
Lower secondary education	0.134	0.340	0	0	1
Upper secondary education	0.363	0.481	0	0	1
First-stage tertiary education	0.167	0.373	0	0	1
Second-stage tertiary education	0.169	0.375	0	0	1
Doctoral education	0.019	0.135	0	0	1
Male	0.632	0.482	1	0	1
Single	0.190	0.392	0	0	1
Married	0.585	0.493	1	0	1
Widowed	0.120	0.324	0	0	1
Household size	2.397	1.236	2	1	14
Homeownership	0.762	0.426	1	0	1
Saving for housing purchase	0.104	0.306	0	0	1
Saving for other major purchases	0.178	0.383	0	0	1
Saving to start a business	0.017	0.129	0	0	1
Saving to buy financial assets	0.036	0.187	0	0	1
Saving for precautionary purposes	0.631	0.483	1	0	1
Saving for repaying debts	0.079	0.270	0	0	1
Saving for retirement	0.439	0.496	0	0	1
Saving for travel/holidays	0.250	0.433	0	0	1
Saving for inter vivos transfers	0.251	0.434	0	0	1
Saving for bequests	0.107	0.309	0	0	1
Saving to profit from government subsidies	0.020	0.138	0	0	1

Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank.

Table 2: Descriptive Statistics (Under-60 Sample)					
Variable	Mean	Std. Dev.	Median	Minimum	Maximum
Wealth/Income	5.283	7.354	3.217	0	74.368
Log(Wealth/Income)	0.862	1.528	1.168	-10.643	4.309
Age	44.827	9.836	46	16	59
Age^2/100	21.062	8.413	21.16	2.56	34.81
Primary education	0.064	0.244	0	0	1
Lower secondary education	0.113	0.317	0	0	1
Upper secondary education	0.406	0.491	0	0	1
First-stage tertiary education	0.195	0.396	0	0	1
Second-stage tertiary education	0.204	0.403	0	0	1
Doctoral education	0.018	0.132	0	0	1
Male	0.642	0.480	1	0	1
Single	0.271	0.445	0	0	1
Married	0.580	0.494	1	0	1
Widowed	0.036	0.186	0	0	1
Household size	2.810	1.332	3	1	14
Homeownership	0.722	0.448	1	0	1
Saving for housing purchase	0.151	0.358	0	0	1
Saving for other major purchases	0.223	0.417	0	0	1
Saving to start a business	0.024	0.154	0	0	1
Saving to buy financial assets	0.046	0.210	0	0	1
Saving for precautionary purposes	0.626	0.484	1	0	1
Saving for repaying debts	0.107	0.309	0	0	1
Saving for retirement	0.366	0.482	0	0	1
Saving for travel/holidays	0.301	0.458	0	0	1
Saving for inter vivos transfers	0.293	0.455	0	0	1
Saving for bequests	0.069	0.254	0	0	1
Saving to profit from government subsidies	0.026	0.158	0	0	1

Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank.

Table 3: Descriptive Statistics (60 or Older Sample)					
Variable	Mean	Std. Dev.	Median	Minimum	Maximum
Wealth/Income	8.869	9.136	6.496	0	74.976
Log(Wealth/Income)	1.572	1.422	1.871	-9.278	4.317
Age	71.205	7.676	70	60	85
Age^2/100	51.291	11.146	49.00	36.00	72.25
Primary education	0.256	0.436	0	0	1
Lower secondary education	0.160	0.367	0	0	1
Upper secondary education	0.308	0.462	0	0	1
First-stage tertiary education	0.131	0.338	0	0	1
Second-stage tertiary education	0.124	0.330	0	0	1
Doctoral education	0.020	0.139	0	0	1
Male	0.620	0.485	1	0	1
Single	0.084	0.277	0	0	1
Married	0.592	0.492	1	0	1
Widowed	0.228	0.420	0	0	1
Household size	1.862	0.838	2	1	11
Homeownership	0.813	0.390	1	0	1
Saving for housing purchase	0.044	0.205	0	0	1
Saving for other major purchases	0.120	0.325	0	0	1
Saving to start a business	0.007	0.083	0	0	1
Saving to buy financial assets	0.023	0.149	0	0	1
Saving for precauitionary purposes	0.638	0.481	1	0	1
Saving for repaying debts	0.044	0.204	0	0	1
Saving for retirement	0.533	0.499	1	0	1
Saving for travel/holidays	0.185	0.389	0	0	1
Saving for inter vivos transfers	0.197	0.398	0	0	1
Saving for bequests	0.156	0.363	0	0	1
Saving to profit from government subsidies	0.011	0.106	0	0	1
Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank.					

Table 4: The Determinants of the Wealth-to-Income Ratio (Full Sample)					
Log(Wealth/Income)	Coeff.	Std. Error	t-value	p-value	
Age	0.028	0.006	5.02	0.000	***
Age^2/100	-0.013	0.004	-3.10	0.006	***
Primary education	-2.913	0.142	-20.52	0.000	***
Lower secondary education	-2.800	0.162	-17.23	0.000	***
Upper secondary education	-2.660	0.129	-20.60	0.000	***
First-stage tertiary education	-2.502	0.099	-25.18	0.000	***
Second-stage tertiary education	-2.525	0.113	-22.39	0.000	***
Doctoral education	-2.417	0.109	-22.08	0.000	***
Male	0.037	0.006	5.96	0.000	***
Single	0.227	0.147	1.55	0.139	
Married	0.196	0.162	1.21	0.243	
Widowed	0.204	0.128	1.60	0.127	
Household size	-0.104	0.021	-4.97	0.000	***
Homeownership	2.213	0.214	10.34	0.000	***
Saving for housing purchase	0.195	0.052	3.75	0.001	***
Saving for other major purchases	0.007	0.024	0.30	0.767	
Saving to start a business	0.515	0.102	5.05	0.000	***
Saving for buying financial assets	0.196	0.030	6.58	0.000	***
Saving for precautionary purposes	0.024	0.018	1.29	0.214	
Saving for repaying debts	-0.298	0.025	-11.98	0.000	***
Saving for retirement	0.200	0.060	3.31	0.004	***
Saving for travel/holidays	-0.002	0.063	-0.03	0.979	
Saving for inter vivos transfers	0.098	0.039	2.48	0.023	**
Saving for bequests	0.179	0.021	8.48	0.000	***
Saving to benefit from government subsidies	0.156	0.048	3.22	0.005	***
Constant	0.771	0.180	4.28	0.000	***
Mean of dependent variable		1.171			
R-squared		0.515			
Number of observations		35889			
Notes: *Significant at 10% level, **significant at 5% level, ***significant at 1% level.					
Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank.					

Table 5: The Determinants of the Wealth-to-Income Ratio (Under-60 Sample)					
Log(Wealth/Income)	Coeff.	Std. Error	t-value	p-value	
Age	0.018	0.017	1.05	0.310	
Age^2/100	0.001	0.019	0.04	0.971	
Primary education	-3.858	0.261	-14.76	0.000	***
Lower secondary education	-3.576	0.238	-15.04	0.000	***
Upper secondary education	-3.440	0.238	-14.46	0.000	***
First-stage tertiary education	-3.225	0.195	-16.51	0.000	***
Second-stage tertiary education	-3.255	0.194	-16.77	0.000	***
Doctoral education	-3.250	0.227	-14.29	0.000	***
Male	0.012	0.022	0.57	0.577	
Single	0.241	0.150	1.60	0.126	
Married	0.166	0.182	0.91	0.374	
Widowed	0.239	0.139	1.71	0.104	
Household size	-0.058	0.033	-1.77	0.094	*
Homeownership	2.004	0.231	8.68	0.000	***
Saving for housing purchase	0.193	0.033	5.88	0.000	***
Saving for other major purchases	-0.002	0.022	-0.10	0.920	
Saving to start a business	0.561	0.111	5.05	0.000	***
Saving for buying financial assets	0.242	0.034	7.12	0.000	***
Saving for precautionary purposes	0.022	0.034	0.64	0.530	
Saving for repaying debts	-0.288	0.048	-6.05	0.000	***
Saving for retirement	0.217	0.046	4.76	0.000	***
Saving for travel/holidays	-0.004	0.095	-0.04	0.966	
Saving for inter vivos transfers	0.111	0.053	2.08	0.052	*
Saving for bequests	0.191	0.037	5.12	0.000	***
Saving to benefit from government subsidies	0.184	0.045	4.08	0.001	***
Constant	1.717	0.333	5.16	0.000	***
Mean of dependent variable	0.862				
R-squared	0.468				
Number of observations	20278				
Notes: *Significant at 10% level, **significant at 5% level, ***significant at 1% level.					
Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank.					

Table 6: The Determinants of the Wealth-to-Income Ratio (60-or-Older Sample)					
Log(Wealth/Income)	Coeff.	Std. Error	t-value	p-value	
Age	0.181	0.092	1.96	0.065	*
Age^2/100	-0.121	0.063	-1.92	0.071	*
Primary education	-0.789	0.131	-6.03	0.000	***
Lower secondary education	-0.780	0.172	-4.52	0.000	***
Upper secondary education	-0.587	0.084	-7.01	0.000	***
First-stage tertiary education	-0.529	0.066	-8.07	0.000	***
Second-stage tertiary education	-0.549	0.077	-7.16	0.000	***
Doctoral education	-0.275	0.091	-3.01	0.007	***
Male	0.073	0.024	2.99	0.008	***
Single	0.203	0.126	1.60	0.126	
Married	0.222	0.120	1.85	0.081	*
Widowed	0.202	0.147	1.37	0.189	
Household size	-0.180	0.025	-7.22	0.000	***
Homeownership	2.530	0.186	13.60	0.000	***
Saving for housing purchase	0.052	0.092	0.56	0.581	
Saving for other major purchases	0.039	0.037	1.06	0.302	
Saving to start a business	0.199	0.082	2.43	0.026	**
Saving for buying financial assets	0.036	0.108	0.33	0.743	
Saving for precautionary purposes	0.030	0.029	1.03	0.319	
Saving for repaying debts	-0.167	0.043	-3.92	0.001	***
Saving for retirement	0.167	0.094	1.78	0.092	*
Saving for travel/holidays	-0.021	0.024	-0.85	0.407	
Saving for inter vivos transfers	0.078	0.031	2.50	0.022	**
Saving for bequests	0.154	0.019	8.20	0.000	***
Saving to benefit from government subsidies	0.026	0.049	0.52	0.607	
Constant	-6.647	3.318	-2.00	0.060	*
Mean of dependent variable	1.572				
R-squared	0.553				
Number of observations	15611				
Notes: *Significant at 10% level, **significant at 5% level, ***significant at 1% level.					
Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank.					

Table 7: The Composition of Household Wealth by Saving Motive (Full Sample)				
	1	2	3	4
Saving motive	Proportion of respondents saving for each saving motive (percent)	Percent change in wealth-to-income ratio that is attributable to each saving motive (households saving for each motive) (percent)	Percent change in wealth-to-income ratio that is attributable to each saving motive (all households) (percent)	Share of wealth for each saving motive (percent)
Saving for housing purchase	10.4	19.5	2.028	12.43
Saving for other major purchases	17.8	0.7	0.125	0.76
Saving to start a business	1.7	51.5	0.876	5.37
Saving to buy financial assets	3.6	19.6	0.706	4.33
Saving for precautionary purposes	63.1	2.4	1.514	9.28
Saving for repaying debts	7.9	-29.8	-2.354	-14.43
Saving for retirement	43.9	20.0	8.780	53.83
Saving for travel/holidays	25.0	-0.2	-0.050	-0.31
Saving for inter vivos transfers	25.1	9.8	2.460	15.08
Saving for bequests	10.7	17.9	1.915	11.74
Saving to profit from government subsidies	2.0	15.6	0.312	1.91
Sum			16.311	100.00

Notes: The figures in column 1 are taken from Table 1, and the figures in column 2 are taken from Table 4. The figures in column 3 are calculated as the product of the figures in columns 1 and 2 divided by 100. Finally, the figures in column 4 are calculated as the ratio of the figures in column 3 to the sum of the figures in column 3.

Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank.

Table 8: The Composition of Household Wealth by Saving Motive (Under-60 Sample)				
	1	2	3	4
Saving motive	Proportion of respondents saving for each saving motive (percent)	Percent change in wealth-to-income ratio that is attributable to each saving motive (households saving for each motive) (percent)	Percent change in wealth-to-income ratio that is attributable to each saving motive (all households) (percent)	Share of wealth for each saving motive (percent)
Saving for housing purchase	15.1	19.3	2.914	17.67
Saving for other major purchases	22.3	-0.2	-0.045	-0.27
Saving to start a business	2.4	56.1	1.346	8.16
Saving to buy financial assets	4.6	24.2	1.113	6.75
Saving for precautionary purposes	62.6	2.2	1.377	8.35
Saving for repaying debts	10.7	-28.8	-3.082	-18.68
Saving for retirement	36.6	21.7	7.942	48.15
Saving for travel/holidays	30.1	-0.4	-0.120	-0.73
Saving for inter vivos transfers	29.3	11.1	3.252	19.72
Saving for bequests	6.9	19.1	1.318	7.99
Saving to profit from government subsidies	2.6	18.4	0.478	2.90
Sum			16.495	100.00

Notes: The figures in column 1 are taken from Table 1, and the figures in column 2 are taken from Table 4. The figures in column 3 are calculated as the product of the figures in columns 1 and 2 divided by 100. Finally, the figures in column 4 are calculated as the ratio of the figures in column 3 to the sum of the figures in column 3.

Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank.

Table 9: The Composition of Household Wealth by Saving Motive (60-or-Older Sample)

	1	2	3	4
Saving motive	Proportion of respondents saving for each saving motive (percent)	Percent change in wealth-to-income ratio that is attributable to each saving motive (households saving for each motive) (percent)	Percent change in wealth-to-income ratio that is attributable to each saving motive (all households) (percent)	Share of wealth for each saving motive (percent)
Saving for housing purchase	4.4	5.2	0.229	1.57
Saving for other major purchases	12.0	3.9	0.468	3.21
Saving to start a business	0.7	19.9	0.139	0.96
Saving to buy financial assets	2.3	3.6	0.083	0.57
Saving for precautionary purposes	63.8	3.0	1.914	13.13
Saving for repaying debts	4.4	-16.7	-0.735	-5.04
Saving for retirement	53.3	16.7	8.901	61.06
Saving for travel/holidays	18.5	-2.1	-0.389	-2.66
Saving for inter vivos transfers	19.7	7.8	1.537	10.54
Saving for bequests	15.6	15.4	2.402	16.48
Saving to profit from government subsidies	1.1	2.6	0.029	0.20
Sum			14.578	100.00

Notes: The figures in column 1 are taken from Table 1, and the figures in column 2 are taken from Table 4. The figures in column 3 are calculated as the product of the figures in columns 1 and 2 divided by 100. Finally, the figures in column 4 are calculated as the ratio of the figures in column 3 to the sum of the figures in column 3.

Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank.

Table 10: Descriptive Statistics (Countries with Generous Public Pension Benefits)					
Variable	Mean	Std. Dev.	Median	Minimum	Maximum
Wealth/Income	6.785	8.247	4.465	0	74.976
Log(Wealth/Income)	1.141	1.558	1.496	-9.948	4.317
Age	56.519	15.842	57	16	85
Age^2/100	34.454	17.881	32.49	2.56	72.25
Primary education	0.176	0.381	0	0	1
Lower secondary education	0.155	0.362	0	0	1
Upper secondary education	0.352	0.478	0	0	1
First-stage tertiary education	0.152	0.359	0	0	1
Second-stage tertiary education	0.151	0.358	0	0	1
Doctoral education	0.013	0.114	0	0	1
Male	0.623	0.485	1	0	1
Single	0.194	0.396	0	0	1
Married	0.568	0.495	1	0	1
Widowed	0.126	0.332	0	0	1
Household size	2.381	1.239	2	1	14
Homeownership	0.755	0.43	1	0	1
Saving for housing purchase	0.095	0.293	0	0	1
Saving for other major purchases	0.147	0.355	0	0	1
Saving to start a business	0.014	0.119	0	0	1
Saving to buy financial assets	0.029	0.168	0	0	1
Saving for precautionary purposes	0.629	0.483	1	0	1
Saving for repaying debts	0.073	0.26	0	0	1
Saving for retirement	0.426	0.494	0	0	1
Saving for travel/holidays	0.219	0.413	0	0	1
Saving for inter vivos transfers	0.239	0.427	0	0	1
Saving for bequests	0.118	0.322	0	0	1
Saving to profit from government subsidies	0.017	0.131	0	0	1

Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank. The sample is limited to households in countries whose average public pension replacement rate is higher than the median.

Table 11: The Determinants of the Wealth-to-Income Ratio (Countries with Generous Public Pension Benefits)					
Log(Wealth/Income)	Coeff.	Std. Error	t-value	p-value	
Age	0.027	0.007	3.86	0.004	***
Age^2/100	-0.011	0.005	-2.09	0.066	*
Primary education	-0.203	0.068	-3.01	0.015	**
Lower secondary education	-0.058	0.080	-0.73	0.486	
Upper secondary education	0.041	0.054	0.76	0.466	
First-stage tertiary education	0.130	0.045	2.92	0.017	**
Second-stage tertiary education	0.120	0.052	2.30	0.047	**
Doctoral education	0.250	0.115	2.17	0.058	*
Male	0.036	0.007	5.08	0.001	***
Single	0.075	0.038	1.98	0.079	*
Married	0.026	0.051	0.50	0.628	
Widowed	0.060	0.031	1.93	0.085	*
Household size	-0.083	0.008	-10.07	0.000	***
Homeownership	2.433	0.181	13.46	0.000	***
Saving for housing purchase	0.129	0.081	1.60	0.144	
Saving for other major purchases	0.013	0.044	0.30	0.772	
Saving to start a business	0.490	0.172	2.85	0.019	**
Saving to buy financial assets	0.214	0.093	2.29	0.048	**
Saving for precautionary purposes	0.032	0.017	1.81	0.103	
Saving for repaying debts	-0.245	0.026	-9.60	0.000	***
Saving for retirement	0.149	0.064	2.31	0.046	**
Saving for travel/holidays	0.089	0.074	1.20	0.260	
Saving for inter vivos transfers	0.056	0.024	2.33	0.045	**
Saving for bequests	0.166	0.027	6.22	0.000	***
Saving to profit from government subsidies	0.083	0.073	1.14	0.285	
Constant	-1.945	0.129	-15.04	0.000	***
Mean of dependent variable		1.140			
R-squared		0.565			
Number of observations		28480			
Notes: *Significant at the 10% level, significant at the 5% level, ***significant at the 1%					
Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank. The sample is limited to households in countries whose average public pension replacement rate is higher than the median.					

Table 12: The Composition of Household Wealth by Saving Motive (Countries with Generous Public Pension Benefits)

	1	2	3	4
Saving motive	Proportion of respondents saving for each saving motive (percent)	Percent change in wealth-to-income ratio that is attributable to each saving motive (households saving for each motive) (percent)	Percent change in wealth-to-income ratio that is attributable to each saving motive (all households) (percent)	Share of wealth for each saving motive (percent)
Saving for housing purchase	9.5	12.9	1.23	8.35
Saving for other major purchases	14.7	1.3	0.19	1.30
Saving to start a business	1.4	49	0.69	4.67
Saving to buy financial assets	2.9	21.4	0.62	4.23
Saving for precautionary purposes	62.9	3.2	2.01	13.71
Saving for repaying debts	7.3	-24.5	-1.79	-12.18
Saving for retirement	42.6	14.9	6.35	43.23
Saving for travel/holidays	21.9	8.9	1.95	13.28
Saving for inter vivos transfers	23.9	5.6	1.34	9.12
Saving for bequests	11.8	16.6	1.96	13.34
Saving to profit from government subsidies	1.7	8.3	0.14	0.96
Sum			14.68	100.00

Notes: The figures in column 1 are taken from Table 1, and the figures in column 2 are taken from Table 4. The figures in column 3 are calculated as the product of the figures in columns 1 and 2 divided by 100. Finally, the figures in column 4 are calculated as the ratio of the figures in column 3 to the sum of the figures in column 3.

Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank. The sample is limited to households in countries whose average public pension replacement rate is higher than the median.

Table 13: The Determinants of the Accumulation Rate of Net Financial Wealth (Full Sample)

The accumulation rate of net financial wealth	Coeff.	Std. Error	t-value	p-value	
Age	0.008	0.013	0.63	0.548	
Age^2/100	-0.007	0.011	-0.63	0.543	
Primary education	-0.850	0.128	-6.62	0.000	***
Lower secondary education	-0.762	0.158	-4.81	0.001	***
Upper secondary education	-0.814	0.125	-6.49	0.000	***
First-stage tertiary education	-0.832	0.125	-6.64	0.000	***
Second-stage tertiary education	-0.721	0.114	-6.30	0.000	***
Doctoral education	-0.957	0.134	-7.15	0.000	***
Male	-0.030	0.034	-0.88	0.404	
Single	0.228	0.054	4.24	0.003	***
Married	0.093	0.038	2.41	0.042	**
Widowed	0.072	0.071	1.02	0.338	
Household size	-0.001	0.017	-0.08	0.938	
Homeownership	-0.013	0.027	-0.49	0.637	
Wealth in wave 2	0.000	0.000	-0.31	0.767	
Saving for housing purchase	0.206	0.106	1.94	0.089	*
Saving for other major purchases	0.029	0.022	1.29	0.235	
Saving to start a business	-0.078	0.118	-0.66	0.530	
Saving for buying financial assets	0.061	0.015	4.16	0.003	***
Saving for precautionary purposes	0.076	0.032	2.36	0.046	**
Saving for repaying debts	-0.063	0.031	-2.02	0.078	*
Saving for retirement	0.105	0.027	3.87	0.005	***
Saving for travel/holidays	0.194	0.095	2.04	0.075	*
Saving for inter vivos transfers	0.115	0.022	5.32	0.001	***
Saving for bequests	-0.057	0.019	-3.05	0.016	**
Saving to benefit from government subsidies	0.087	0.037	2.35	0.047	**
Constant	0.424	0.450	0.94	0.374	
Mean of dependent variable		0.132			
R-squared		0.046			
Number of observations		7571			

Notes: *Significant at 1% level, **significant at 5% level, ***significant at 1% level.

Source: Authors' calculations based on data from the Household Finance and Consumption Survey (HFCS), which is conducted by the European Central Bank. The sample is a panel constructed from waves 2 and 3 of the Survey.