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Ownership of individual retirement accounts – an empirical analysis based on SHARE

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Abstract

This paper examines the household retirement saving decisions in what concerns to the ownership of Individual Retirement Accounts (IRAs) in eight European Union (EU) countries. IRAs are more and more seen as an alternative to public pension benefits, which are decreasing. Therefore, understanding the enrolment in IRAs, both the socio-economic factors and over time, is most important. Detailed empirical analysis of the factors that might influence the ownership of IRAs is presented based on Survey of Health Ageing and Retirement in Europe (SHARE), using data from Wave 2 (2006-2007) and Wave 4 (2010-2011). Further, to analyse the impact of legal retirement age in the ownership of IRAs, two subsamples are considered: people aged between 50 and 64 years old (50-64 years) and people aged 65 or over (≥ 65 years). The results suggest that age, years of education, income and ownership of dwelling influence positively and significantly household saving, while number of children, marital status and risk aversion have a negative effect. Marital status and income are not statistically significant for retired people. Policy implications are derived.

Keywords

households; savings; retirement; SHARE; Europe

1. Introduction

Demographic change is challenging development sustainability (Martinez-Fernandez et al., 2012). The low levels of birth rates in most developed countries, the decline in mortality rates, and the increase in life expectancy had put pension systems design in debate (World Bank, 1994). A lower proportion of working population and a higher proportion of retired people, receiving social benefits, increased expenditures and decreased revenues of pay-as-you-go social security systems. Hence, the impact of population ageing on social security

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systems financial sustainability and the need for reform has been much analysed, especially the raising of the normal retirement age towards the rise of elderly work (see, for example, Ghilarducci, 2010; Orenstein, 2013; OECD, 2013). At the same time, many private sector pension schemes are facing severe funding difficulties as a result of poor stock market returns, fall in interest rates and increased longevity (Bloom et al., 2007; Antolin and Stewart; 2009; OECD, 2011). Moreover, many European Union (EU) member States, in order to meet the requirements of fiscal discipline, made changes to their pension systems or to funds they had established specifically to pay the costs of population ageing, allowing them to free up resources immediately (Casey, 2014).

Given the macroeconomic evolution after the 2008 financial crisis (Bezemer, 2009; Colander et al., 2009) and the ongoing pension systems changes that rely on individual responsibility, it is important to try to understand how households are reacting to these changes that affected their jobs, their incomes, their levels of debt and consumption, and possibly their retirement saving decisions.

This paper has the objective of analysing the determinants of households' retirement saving decisions concerning Individual Retirement Accounts (IRAs) during a period that includes the financial crisis of 2008 and when several social security reforms were already enacted in several European countries, namely the statutory retirement age increase and the introduction of an automatic link between pension levels and life expectancy (Holzman, 2003; Börsch-Supan, 2004). Hence, factors, such as age, gender, nationality, education, marital status, job situation, income, among others, were considered as explanatory variables.

The empirical analysis is based on the micro data of the European project Survey of Health, Ageing and Retirement in Europe (SHARE)¹. SHARE consists in a questionnaire that is only answered by people with 50 years old or over, from 18 European countries and Israel, and is organized in five waves² including information about health, socio-economic status and family networks. The first wave included 12 countries and 20 modules on health, socio-economics and social networks (Börsch-Supan, 2013; Börsch-Supan et al., 2005; Börsch-Supan and Jürges, 2005; Börsch-Supan et al., 2013). Subsequent waves included more countries and more modules.

With this paper we contribute to the scarce literature on household retirement saving decisions in Europe through the analysis of the enrolment determinants in IRAs. Due to data constraints, eight European countries were selected, that is, countries that have contributed to both waves 2 and 4 concerning the ownership of IRAs. A deep knowledge on the characteristics that influence retirement saving decisions might be taken into account by policy makers to boost retirement savings and to prepare for continuing challenges to their pension systems in an ageing society (Börsch-Supan, 2004).

¹See SHARE Survey of Health, Ageing and Retirement in Europe, 2012.

²The third wave of data collection for SHARE is also known as SHARELIFE. The fieldwork for wave 5 was done but collected data and the conclusions were not released yet.

This paper is organized in six sections. The second section makes a brief literature review on the determinants of household saving decisions concerning IRAs. Section three presents the data base SHARE and the sample used. The model and the methodology are described in section four. The results are reported on section five. Finally, the main conclusions are presented.

2. Literature review

The saving decision has long been studied (Sturm, 1983). It is beyond our scope to review all the numerous previous studies on saving motives and determinants. For example, some references are Browning and Lusardi (1996), Devaney et al. (2007), Fisher et al. (2012), and Lusardi (2009).

Household saving represents a decision not to consume disposable income. Saving for retirement is one of the major motives leading to that decision, and consists on building up assets to finance consumption after retirement. In fact, saving for retirement is the base of life cycle hypothesis models of household consumption decisions (Modigliani, 1986, 1988; Campbell and Mankiw, 1990; Carrol, 1997). Accordingly, the household accumulates wealth during the working period, reaching a peak at retirement age, after which a dissaving period will start. Consequently, the time profile of household saving will depend on several variables, among which the age is considered to be one of the most important. Other variables as the degree of risk-aversion, the market interest rate, the permanent income, and the functioning of capital markets are also relevant. In addition, the length of the retirement span relative to the income earning period will surely affect the saving decision in the later period. However, Campbell (2006) claims that the study of household finance is demanding because household behaviour is difficult to measure.

The demographic trends and the current context of economic and financial crisis are putting pressure and strain in the financial sustainability of social security systems that provide financial security for retired people, possibly endangering the future of those systems. Therefore, people might expect lower pension wealth from pay-as-you-go social security systems and might start to take retirement saving decisions (Sturm, 1983), which increases the relevance of an individual's or household's abilities to make the correct choices when it comes to providing for their retirement (Banks and Oldfield, 2007). Shefrin and Thaler (1988, 1992) noted the fact that people continued to save money for their pensions despite the public contribution, as already detected by Cagan (1965) and Katona (1965).

The relation between social security system and personal saving has long been analysed. Feldstein (1974) defended that social security contributions depress personal savings, although there is an ongoing debate on that (Lesnoy and Leimer, 1985). In addition, the debate on social security financial sustainability contributed to proposals of retirement-income systems with three tiers, encouraging people to save for their own retirement to make up for reductions in public benefits (OECD, 2011).

Since personal saving rates have exhibited large declines since the last two decades of the twentieth century, many governments stimulated personal long-term saving either by

establishing a legal framework for financial institutions and by offering tax incentives to savers (World Bank, 1994, 2001). Hence, to boost saving, several countries, created IRAs (also labelled voluntary long-term saving accounts) with new and extended tax incentives (Attanasio and Banks, 1998; Garcia *et al.*, 2011). The proponents of IRAs believe that by exempting contributors from certain taxes they would induce an increase in personal savings above the tax revenue loss. However, IRAs may not be as effective in increasing savings as their advocates believe. Conflicting conclusions have been reached by researchers based on the U.S. case (Skinner, 1991). Eventually, the degree of adhesion to these accounts tend to be small and it is not clear whether tax incentives have increased aggregate saving, whilst most of the tax benefits have gone to high-income households (Gale and Scholz, 1994; McCarthy and Pham, 1995; Skinner and Hubbard, 1996; Antolin *et al.*, 2004). As demonstrated in Chetty *et al.* (2013), retirement saving is largely a passive, not active, decision.

This paper analyses the enrolment pattern of IRAs in several European countries before and after the financial crisis of 2008.

Previous research on the factors affecting retirement saving decisions include socio-economic characteristics as well as expectations and attitudes variables. Distinguished characteristics of IRAs contributors include age, wealth, and income in the sense that the typical IRA contributor is one who is older, with higher income and more liquid wealth than the rest of population (Skinner, 1991). Nevertheless, other explanatory variables may be considered. This has been the case in more recent research that use SHARE or similar databases as the U.S. Health and Retirement Study (HRS) and the English Longitudinal Study of Ageing (ELSA). For example, Lundberg and Ward-Batts (2000) used the HRS to analyse the effects of husband and wife characteristics in saving behaviour. They found that while age, health status and education of both partners are important determinants of net worth, simple measures of relative bargaining power (as the age difference between husband and wife) do not in general have significant effects on household assets. Clark *et al.* (2006) showed that educational events have influence in retirement saving behaviour making individuals to revise their retirement goals.

According to Fernández-López *et al.* (2010), the main determinants that influence saving behaviour in some EU countries³ are age, financial literacy, income and nationality. Moreover, individuals that live in countries like United Kingdom or Sweden, which have mandatory private pension plans, are positively influenced by their nationality, while individuals from France or Italy, where private pension plans are not mandatory, are negatively influenced.

Agarwal (2007) assesses the impact of house price misestimation on households' consumption and saving behaviours *ex post*, putting in evidence the importance of the ownership of dwelling in saving decision.

³France, Germany, Italy, Netherlands, Poland, Spain, Sweden and UK.

More recently, Jappelli and Padula (2013) estimated two equations using microeconomic data derived by merging of SHARE with SHARELIFE⁴ to analyse the relation between financial literacy and saving decisions. They concluded that financial literacy and wealth are positively correlated over the life-cycle and the early improvements in mathematical skills will eventually increase households' financial literacy and, therefore, wealth accumulation. Alessie et al. (2013) also used data from SHARELIFE to estimate the effects of pension wealth on household savings and the main results suggest that, due to the pension reforms in Europe, households will increase private savings but not enough to smooth consumption over the life-cycle.

Beckmann *et al.* (2013) used data from Euro Survey of the Oesterreichische Nationalbank to analyse the household saving decisions between 2010 and 2011 of ten European countries⁵. They concluded that middle-aged people are most likely to save then younger and older people. Employment, income and education have positive and significant effect on households' savings while the number of younger children in household has positive effect, but not significant, and the number of teenage children has also not significant effect, but negative. Furthermore, risk averse people are more likely to save.

The present work enlarges the previous literature because it uses, for the first time, the SHARE data base to study the determinants of ownership of IRAs in Europe in two time periods, before and after the 2008 financial crisis. The number of explanatory variables considered are based both on the literature review and on the availability data from SHARE. In addition, the legal retirement age is used to split the data in each period and to disentangle specific determinants according to age.

3. Data

The analysis uses data from Survey of Health Ageing and Retirement in Europe (SHARE). The SHARE project started in 2004-2005, with Wave 1, collecting data about health, socio-economics and social networks on people aged 50 or more in various regions in Europe⁶. Later in 2006-2007, with Wave 2, new countries⁷ joined the SHARE project and was collected a first longitudinal follow-up and a refresher sample was added to maintain the representativeness of the survey. In 2008-2009, the third wave of data collection for SHARE, also known as SHARELIFE, questioned all previous respondents about their entire life history information. In the last wave, Wave 4 (2010-2011), more countries joined the project⁸ and new integrated social networks module with respective generated variables were added.

Due to the fact that Wave 3 does not include any variable related to household saving, both Wave 2 and Wave 4 were considered to make the analysis of retirement saving decisions in EU before and after the 2008 financial crisis. Moreover, due to data availability, eight

⁴As mentioned, SHARELIFE is the designation for the third wave of data collection for SHARE.

⁵Albania, Bosnia and Herzegovina, Bulgaria, Czech Republic, Croatia, Hungary, Macedonia FYR, Poland, Romania and Serbia.

⁶Austria, Belgium, Denmark, France, Germany, Greece, Italy, Netherlands, Spain, Sweden, Switzerland and Israel.

⁷Czech Republic, Ireland and Poland.

⁸Estonia, Hungary, Portugal and Slovenia.

European countries were selected: Austria, Denmark, France, Germany, Italy, Netherlands, Spain, and Sweden.

The dependent variable used was *Has Individual Retirement Accounts*⁹. Given the literature review on the factors that influence saving decisions, the independent variables adopted are age, gender, nationality, education, marital status, presence of partner in household, household size, number of children, income, job situation, owner of the dwelling and risk aversion. Table 1 shows the definition of the variables and the expected impact on the ownership of IRAs.

The dependent variable was extracted from *Assets* module of SHARE, while the independent variables were extracted from *Children*, *Coverscreen*, *Demographics*, *Employment and Pensions*, *Expectations*, *Household Income and Housing* modules of SHARE. Therefore, it was needed to merge these modules in order to create the data file used in the analysis.

This obtained data file was then split into two groups: people with age between 50 and 64 years old and people aged 65 or over. The objective of this data split is to have a better understanding of possible different significant determinants and influences, in what concerns to ownership of individual retirement accounts, between people in working age and retired people¹⁰.

Table 2 displays the percentage of individuals with IRAs, by country, by wave, and by age range.

Four countries, Germany, Netherlands, Spain and Sweden, registered a decrease on the percentage of individuals with IRAs from Wave 2 to Wave 4. Moreover, Denmark, France and Sweden are the countries with the highest percentage of ownership of IRAs, while Austria, Italy, Netherlands and Spain are the ones with the lowest levels of that percentage.

Considering the subsample of people aged between 50 and 64, France, Italy and Netherlands show an increase in the percentage of their positive answers from Wave 2 to Wave 4. In this subsample the percentage of individuals with IRAs, for all countries, is much higher than the percentage registered for the subsample of people aged 65 or over.

For the later subsample, of people aged 65 or over, Austria, Germany, Italy, Netherlands and Spain are the countries with the lowest percentages of ownership of IRAs. France was the only country that presents an increase from Wave 2 to Wave 4.

This data analysis is aligned with the household saving rates, a macro indicator, reported by Eurostat, for the period from 1995 to 2012. Figure 1 shows a decreasing trend of household saving rates, on average, although different patterns for different groups of countries can be detected.

⁹An alternative could be *Amount Individual Retirement Accounts*. However, in this case there are much more *refusal* and *don't know* answers.

¹⁰According to the Mutual Information System on Social Protection (MISSOC), 65 years old is the prevalent legal retirement age.

Considering the first group, Figure 2, Austria and France present household saving rates above the average, although very similar with each other. On the other hand, Denmark registers the lowest rates of the selected countries, about 7% during the period 1995-2012.

Figure 3 shows household saving rates for the second group of countries: Germany, Italy, and Netherlands. These three countries have saving rates above the average, for almost the entire period, but Italy and Netherlands show significant decreases along the period that result in household rates below the average after 2009. Germany registers a stable pattern, with rates always above 15%.

In the third group, Figure 4, Spain shows household saving rates below, but very close, the average, during almost the time period. Sweden shows low and volatile household saving rates, with an increasing trend and reaching approximately 15% in 2012.

4. The model

We adopted a probit model to analyse the dependent variable which is a binary variable (Wooldridge, 2009). The ownership of IRAs assumes the value of 1 if the individual answered *yes* and the value of 0 otherwise (Fernández-López, 2010); Beckman et al., 2013).

The probit model is a statistical probability model with two categories in the dependent variable. Probit analysis is based on the cumulative normal probability distribution. The binary dependent variable, y , takes on the values of zero and one. The probit analysis provides statistically significant findings of which factors increase or decrease the probability of ownership. The relationship between a specific variable and the outcome of the probability is interpreted by means of the marginal effect, which accounts for the partial change in the probability. Hence, interest lies primarily in the response probability $P(y=1|X) = P(Y=1|x_1, x_2, \dots, x_k)$, where X denotes the full set of explanatory variables. In this paper, x contains various socioeconomic and demographic characteristics that might affect the ownership of IRAs. These characteristics are age, gender, nationality, education, marital status, presence of partner in household, household size, number of children, income¹¹, job situation, owner of the dwelling and risk aversion.,

Moreover, to ensure that the estimated response probabilities are strictly between zero and one, the probability of choosing any alternative over not choosing it is expressed as a cumulative distribution of a standard normal random variable.

A probit model can be derived from an underlying latent variable model represented by

$$y^* = \alpha + \sum X\beta + \varepsilon, \varepsilon \sim N(0, 1), \quad (1)$$

¹¹The variable considered for income represents the total income received in previous years (2005 and 2009, respectively).

where y^* represents the unobserved continuous variable that determines the value of y , α the constant, X the vector of the independent variables, β the parameters and ε the random

disturbance term. The value of y is obtained as
$$y = \begin{cases} 1 & \text{if } y^* > 0 \\ 0 & \text{otherwise} \end{cases}$$

The model was estimated using data from the selected countries which is an unbalanced data set.

Several versions of the model were estimated according to the two waves and according to the data split age criterion. First, it was applied for the total sample for both Waves 2 (with 1240 observations – Model 1) and 4 (with 9306 observations – Model 2). Second, the estimation used the subsample of people aged between 50 and 64 years old, with 355 observations in Wave 2 (Model 3) and 4450 observation in Wave 4 (Model 4), and the subsample of people aged 65 or over, with 885 and 4856 observations for Wave 2 (Model 5) and 4 (Model 6), respectively.

5. Empirical results

Table 3 presents the results of marginal effects from the probit regression of model 1 and 2, based on data from Waves 2 and 4, respectively. In both models, the results show that the variables that have a strong positive relationship with the ownership of IRAs are age, years of education and income, as expected. On the other hand, marital status (married) and risk showed a strong negative relationship. This suggests that married people and risk averse people are less likely to own IRAs.

In Wave 2, gender showed statistically significance effect, in which male people are less likely to own IRAs. This result is consistent with mentioned previous works that emphasize the increase on female participation ratio as a possible explanation to their ownership of IRAs. The number of children showed a strong negative relationship only in Wave 2, which might be explained by the fact that people with children give more importance to the bequest motive, referred by Sturm (1983) and by Lundberg and Ward-Batts (2000).

The presence of partner in household behaved different than the other variables, changing from strong negatively, in Wave 2, to strong positively relationship, in Wave 4.

In Wave 4, the ownership of dwelling presented strong positively related with the possession of IRAs. This highlights the relation between the level of wealth and the saving decision.

The results for the current job situation (employed) showed a negative relation with the dependent variable, ownership of IRAs, but only statistically significant at 5% in Wave 4, meaning that employed people are less likely to have IRAs. This result is different of the ones of Fernández-López *et al.* (2010) and Beckmann *et al.* (2013), probably because the employed people rely on an occupational pension plan.

The variable high education degree is not statistically significant, which means that obtaining a high degree seems not to influence the ownership of IRAs. However, the number of years of education showed a strong positive impact, in both Waves.

In Wave 2, household size presented no statistical significance which is a result similar with the one of Fernández-López *et al.* (2010) that conclude that the saving decision, in this case for retirement, is not influenced by the household size but its capacity to generate income. However, in Wave 4, it is statistically significant with negative effect in the ownership of IRAs.

The last variable with statistical significance in the possession of IRAs is nationality, that shows the impact of country-level institutional factors in saving decision, which is consistent with Fernández-López *et al.* (2010) that refer that living in a country with mandatory private pension plans positively influence retirement saving decision.

Table 4 presents the results for the younger group for both waves (models 3 and 4) and Table 5 gives the results for the older group also for both waves (models 5 and 6).

In model 3, the variables age, marital status (married), presence of partner in household and income have no statistical significance, while years of education, number of children and country are significant at 5% level. The ownership of dwelling is significant at 10% level. The results of model 4 are similar to the results of model 2.

Model 5 results show that, wave 2, gender (male), years of education and income are not statistically significant and the presence of a partner in household and the number of children lost significance level. In model 6, wave 4, age, marital status (married), partner in household and job situation are no longer statistically significant and income is only significant at 10%, losing levels of significance.

6. Conclusions

In this paper, SHARE data was used to analyse the variables that influence household retirement saving decision measured through the ownership of IRAs. We adopted the probit model and used different samples created from SHARE data, for both Waves 2 and 4.

The findings corroborate previous literature on the main factors that influence retirement saving behaviour in some EU countries, namely age, years of education and income, and put in evidence the impact of the 2008 financial crisis in the ownership of IRAs.

The results are a relevant contribution to policymakers alike and highlight the factors that determine the retirement saving decision, in a period of decreasing trend of household saving rates and in a context of pension reforms that decrease the pension promise and give prominent role to individuals (OECD, 2013). Data concerning retirement saving decisions and household saving rates contradict the argument that people are aware of the problems about ensuring an adequate retirement income and, therefore, will save more. Actually, people can be aware of those problems but, due to the current financial situation, have no possibility to save, which can give rise to poverty in old age. In addition, a financial literacy problem might be the cause for these findings (Banks and Oldfield, 2007). Saving for retirement is never easy (Ghillarducci, 2008, 2010), which makes the analysis of its determinants a most important one.

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Figure 1. Household Saving Rates, Average Selected Countries

Figure 2. Household Saving Rates, Austria, Denmark and France

Figure 3. Household Saving Rates, Germany, Italy, and Netherlands

Figure 4. Household Saving Rates, Spain and Sweden

Table 1
Definition of Variables

Variables	Description	Expected effect
<i>Dependent</i>		
Has individual retirement accounts	Assumes value 1 if respondent has IRA; 0 otherwise	
<i>Independent</i>		
Age	Age of the respondent	+/-
Male	Assumes value 1 if respondent is male; 0 otherwise	+/-
Nationality	Nationality of respondent: 11 = Austria; 12 = Germany; 13 =Sweden; 14 =Netherlands; 15 = Spain; 16 =Italy; 17 =France; 18 = Denmark	+/-
Years of education	Number of years of education of respondent	+
High education degree obtained	Assumes value 1 if respondent has a high degree; 0 otherwise	+/-
Married	Assumes value 1 if respondent is married; 0 otherwise	+/-
Partner in household	Assumes value 1 if respondent's partner is in household; 0 otherwise	+
Household size	Number of persons in household	+
Number of children	Number of children in household	+
Employed	Assumes value 1 if respondent is employed; 0 otherwise	+
Income	Income received in previous year	+
Own dwelling	Assumes value 1 if respondent has the ownership of dwelling; 0 otherwise	+
Risk aversion	Attitude toward taking financial risks: 1 = respondent isn't willing to take any financial risks; 0 otherwise	+

Table 2
Percentage of Individuals with IRAs, by country, by wave, and by age range

Country	Total			Age 50-64			Age 65 or more		
	w2	w4	w4	w2	w4	w4	w2	w4	w4
Austria	8.12%	10.53%	25.00%	21.31%	4.40%	3.20%			
Denmark	36.82%	37.04%	61.61%	55.20%	25.23%	22.41%			
France	30.85%	38.57%	34.94%	41.12%	29.05%	36.71%			
Germany	13.09%	11.22%	25.93%	24.16%	7.89%	5.38%			
Italy	1.94%	2.27%	5.41%	5.68%	0.83%	0.47%			
Netherlands	8.29%	8.13%	14.60%	15.01%	5.19%	3.70%			
Spain	9.96%	8.77%	22.28%	19.58%	5.08%	2.65%			
Sweden	46.57%	40.12%	69.40%	67.85%	39.73%	31.94%			

Source: SHARE

Table 3
Marginal Effects from Probit Regression

	Model 1	Model 2
Wave	2	4
Age	0.0183493 *** (0.004366)	0.014491 *** (0.0016951)
Male	-0.2640075 ** (0.1038704)	0.0207021 (0.0323777)
Nationality	0.0827814 *** (0.6340663)	0.0238923 *** (0.0023571)
Years of Education	0.0290962 *** (0.0109362)	0.0514614 *** (0.0034587)
High Education	0.0011516 (0.0020582)	-0.0000797 (0.0007348)
Married	-0.4914483 * (0.2857534)	-0.2382071 *** (0.0617959)
Partner in household	-0.301089 *** (0.1091568)	0.291622 *** (0.0659328)
Household Size	0.0633852 (0.0429099)	-0.0646553 (0.0187936)
Number of Children	-0.0957937 *** (0.0340706)	-0.0105042 (0.0117117)
Employed	-0.0070185 (0.0055769)	-0.0035995 * (0.0016303)
Income	0.3398402 ** (0.1731486)	0.1389417 ** (0.0516119)
Own Dwelling	0.1324044 (0.0923827)	0.3365688 *** (0.0373336)
Risk Aversion	-0.6340663 *** (0.0973427)	-0.4763434 *** (0.0352479)
Number of observations	1240	9306
Correctly Predicted	83.71%	79.97%
Log Likelihood	-477.25383	-4229.5939
Pseudo R ²	0.1466	0.1038
LR χ^2 (13)	163.96	979.89

The standard errors are in parentheses.

* : significant at the 10% level

** : significant at the 5% level

*** : significant at the 1% level.

Table 4
Marginal Effects from Probit Regression (Population Aged between 50 and 65)

	Model 3	Model 4
Wave	2	4
Age	0.0570329 (0.0349153)	0.0257081 *** (0.0057481)
Male	-0.4079188 ** (0.1640103)	0.0241034 (0.043081)
Nationality	0.0842227 ** (0.0376604)	0.0177732 *** (0.0033179)
Years of Education	0.0466553 ** (0.0189904)	0.442931 *** (0.0045871)
High Education	0.0049613 (0.0034173)	-0.0012096 (0.001217)
Married	-0.2439305 (0.3743035)	-0.1919011 *** (0.732946)
Partner in household	-0.192876 (0.1673724)	0.3862253 *** (0.079536)
Household Size	0.0213103 (0.0687262)	-0.082348 *** (0.023277)
Number of Children	-0.1138087 * (0.0645624)	-0.0193402 (0.0179694)
Employed	-0.0185165 (0.0183622)	-0.0043985 ** (0.002164)
Income	0.1637495 (0.2541687)	0.226153 *** (0.0567923)
Own Dwelling	0.272295 * (0.1548014)	0.2876176 *** (0.0506808)
Risk Aversion	-0.5302678 *** (0.1620807)	-0.4724115 *** (0.0461172)
Number of observations	355	4450
Correctly Predicted	75.21%	73.30%
Log Likelihood	-180.71834	-2394.7629
Pseudo R ²	0.1193	0.0824
LR χ^2 (13)	48.95	430.08

The standard errors are in parentheses.

* : significant at the 10% level

** : significant at the 5% level

*** : significant at the 1% level.

Table 5
Marginal Effects from Probit Regression (Population Aged 65 or Over)

	Model 5	Model 6
wave	2	4
Age	0.0176577 *** (0.0067926)	-0.0031899 (0.0032814)
Male	-0.1517996 (0.1356975)	0.0579876 (0.0512377)
Nationality	0.0873448 *** (0.0313627)	0.0334223 *** (0.0034436)
Years of Education	0.0204199 (0.013793)	0.063788 *** (0.0054621)
High Education	-0.0014422 (0.0027346)	0.0003805 (0.000934)
Married	-0.874545 * (0.5086518)	-0.1710634 (0.1207554)
Partner in household	-0.3427076 ** (0.1472702)	0.1994887 (0.1269263)
Household Size	0.0862764 (0.0565219)	-0.1177792 *** (0.0386533)
Number of Children	-0.0801435 ** (0.0405722)	-0.0000352 (0.015634)
Employed	-0.0054318 (0.0064838)	-0.0026654 (0.0025153)
Income	0.5057469 ** (0.2425842)	-0.2035231 * (0.1098047)
Own Dwelling	0.0696741 (0.1177277)	0.3863669 *** (0.0564933)
Risk Aversion	-0.7153142 *** (0.1237444)	-0.4603065 *** (0.0556274)
Number of observations	885	4856
Correctly Predicted	87.68%	85.69%
Log Likelihood	-290.8967	-1789.1697
Pseudo R ²	0.1394	0.0994
LR χ^2 (13)	94.27	394.97

The standard errors are in parentheses.

* : significant at the 10% level

** : significant at the 5% level

*** : significant at the 1% level.