Original Article

Pension reforms in Germany: Have they changed savings behaviour?

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ABSTRACT The German pension reforms in 2001 and 2004 increased the importance of private supplemental savings for retirement. This article shows how investment decisions changed after the reforms and investigates how confident individuals feel in predicting their future income-replacement rate despite the reforms, which complicated the calculation of pension entitlements. It will be shown that women and individuals who are not employed full time have the most problems in predicting their future income-replacement rate. Sending out official pension statements about accumulated pension wealth, as well as providing information on the factors that determine the future pension level, may help individuals to make optimal savings decisions for old age.

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INTRODUCTION

In the United States, individuals have been responsible to partially provide for their own retirement for a long time. Private retirement saving plans and company pensions are an inherent part of retirement income. This is different in Germany, where 75 per cent of retirement income is pay-as-you-go financed.¹ Old-age provision in Germany is composed of three pillars: the statutory pay-as-you-go pension, company pension and private pension. Until the pension reform in 2001, most Germans relied almost solely on their statutory pension

entitlements. In light of population ageing, many scholars projected rising contribution rates. Two pension reforms have taken place in order to distribute the burden more equally among the generations. This in turn entails a decreasing pension level for future pensioners.

Promptly after the reforms were passed, insurance companies and banks reacted by offering a variety of retirement savings plans. For the first time, many German households are now responsible for ensuring that they are able to maintain their standard of living during old age. It can be expected that the importance of private retirement savings increases in the future. Individuals may want to close the pension gap induced by the declining pension level. Realizing an emerging pension gap and changing savings decisions, however, postulates that individuals

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understand the implications of the pension reforms.

This article examines whether individuals possess the confidence in order to form expectations about their future pension entitlements, and how these expectations have changed between 2005 and 2008. Financial knowledge beyond the confidence to estimate one's pension level, however, will not be addressed in this contribution.² Moreover, it will be analysed as to how savings decisions changed during this period.

Before these questions will be investigated empirically, the German pension system and its reforms will be described in more detail. The following section contains a detailed description of the data, the German SAVE Survey, a unique panel covering different topics to improve the understanding of the savings behaviour of individuals and households. This section is followed by descriptive statistics, which depict how savings decisions and the expected statutory pension entitlements changed between 2005 and 2008. An analysis of the socio-demographic characteristics that determine whether someone states his/her expected pension level will also be conducted. After presenting and discussing the results, conclusions will be drawn.

BACKGROUND

Old-age security in Germany

In 2001 a major pension reform, named after the former labour minister Walter Riester, was enacted. This reform aimed to stabilize contribution rates, which had been predicted to increase to about 23 per cent in 2020.³ The contribution rate is equally divided between employer and employee. The possible implications of this projected increase were that the working population would bear a disproportionate amount of the increasing imbalance between the working population and the pensioner. Owing to the defined benefit character of the statutory pension scheme in 2001, pensioners would not have had to sacrifice income. To divide the burden more equally between generations, the pension formula had

been adjusted to make a decrease in the pension level possible. Since 2005, the pension level in Germany has been defined as the ratio of the pension less social insurance contributions of an average earner who contributed 45 years to the pay-as-you-go scheme and the average earnings of the working population less social insurance contributions and average payments for supplemental old-age insurance in the respective year (Social Security Code (SGB) VI § 154 (3) 2).⁴ The income-replacement rate on the other hand is the percentage of the individual's last income, which will be replaced by statutory pension. Pension increases will be slowed by a fictitious contribution rate, which is assumed to be contributed to a private pension plan. The fictitious contribution rate is gradually increasing until it reaches 4 per cent. Saving 4 per cent of yearly gross salary is also required to obtain the full 'Riester Subsidy' which is a state subsidy paid if individuals save for retirement in the form of a specific certified private pension plan. This new part of the pension adjustment formula is called the 'Riester Factor'.⁵ In addition, increases in the contribution rate to the statutory pension scheme will reduce pension adjustments, and therefore reduce the future pension level. The objectives were that contributions to the public pension scheme should stay below 20 per cent until 2020 and below 22 per cent until 2030; and that the pension level should not fall below 46 per cent until 2020 and below 43 per cent until 2030. The pension level has been estimated to be 50.2 per cent in 2009.⁶ Both goals are implemented into the Social Security code (SGB IV § 154).⁴ In addition, a savings subsidy ('Riester Subsidy') had been introduced to make supplemental private and company pensions more attractive.

In principle, everyone saving at least 4 per cent of his income within a 'Riester Pension' plan is entitled to a saving subsidy of €308 plus €185 for each child. For children born after 2007, the child subsidy has been increased to €300. An alternative to the subsidy is receipt of a tax deduction, depending on which is more advantageous for the individual. 'Riester Pension' plans are certified products that have to meet certain criteria set by the government. Criteria

are, for instance, that the provider has to guarantee at least a retirement wealth worth the contributions (individual plus subsidy), and that he has to convert the retirement wealth into a life-long annuity. The self-employed are among a few groups of people that are not entitled to a 'Riester Subsidy'. However, even the self-employed are indirectly entitled to a 'Riester Subsidy' if the partner is entitled.

In 2004 another pension reform followed, which modified the pension formula again by implementing a sustainability factor. This factor accounts for the relationship between the number of individuals paying contributions to the statutory pension system and the number of pensioners. In the case of an increase in the number of pensioners relative to the number of contributors, upward pension adjustments will be slowed.

At present, it is predicted that the contribution rate will rise from 19.9 per cent in 2008 to 20.4 per cent in 2022, and that the pension level will decrease from 50.5 per cent in 2008 to 46.2 per cent in 2022.¹ The German pension system is composed of three pillars. The first and most important pillar is the pay-as-you-go pension scheme. Everyone who is subject to social insurance contributions is covered by this scheme. The contribution rate is 19.9 per cent and divided equally between employee and employer. As described in the introduction, the pension level of the pay-as-you-go scheme has decreased as a result of the pension reforms in 2001 and 2004. Those who are self-employed and individuals earning less than €400 a month are not covered, but could voluntarily participate in the scheme. Another group of employees not covered are civil servants, who receive a non-contributory state pension. The term 'civil servants' will be used to refer to a specific group of public servants. In Germany, public servants could be civil servants, white- or blue-collar workers.^{7,8} The state pension for civil servants has also experienced some reductions in the replacement rate. As of 2009, the pension for a civil servant employed full time, who has worked 40 years, is 72.56 per cent of his last salary. Average pensions for individuals reaching their

pension age have been reduced by 3.4 percentage point between 1998 and 2006.⁹ Unfortunately, a direct comparison of the civil servant pension and the statutory pension is not possible because the pension level of the statutory pension system is not a percentage of the employee's last salary, and civil servants enjoy other special privileges and duties aside from their pension system. The term 'state pension' will be used to describe the pensions of civil servants, and the term 'statutory pension' will refer to pensions of all other employees. In general, civil servants receive a pension that is higher than a comparable employee pension.¹⁰ On the basis of the German Socio-Economic Panel 2007, Frick and Grabka calculated the present value of the accumulated pension wealth for civil servants and blue- and white-collar workers.¹¹ Civil servants aged 63–67 years on average accumulated pension wealth worth €400 000, whereas a comparable blue- or white-collar worker accumulated only €160 000. This is merely 40 per cent of what civil servants were able to accumulate. Hence, there is less need for supplemental retirement savings for civil servants.

Even taking into account recent pension reforms, statutory pensions will continue to be the most important source of retirement income. Nevertheless, in view of the decreasing pension level for most individuals, supplementary measures are necessary to maintain their accustomed standard of living during old age. Schmähl states that it will become increasingly difficult to acquire sufficient pension claims that exceed the need-orientated old-age basic income support.¹² The need-orientated old-age basic income is paid instead of social welfare benefits, both of which are very similar concepts. This is especially the case for individuals who have been unemployed for a long time.

Company pension schemes constitute the second pillar of the pension system. As of 2002, every employee has the right to take advantage of deferred taxation for contributions to an occupational pension scheme. This means that employers have to provide a vehicle with which employees can save for retirement. Employers, however, can decide which type of pension

scheme they offer. White- and blue-collar workers employed in the public service are offered a special form of company pension, which is generally mandatory. The lion's share of the contributions is paid by the public employer. The majority of employees in the private sector, on the other hand, have to pay contributions to a company pension plan completely out of their pocket.

The third pillar is private pension plans, which could be all kinds of voluntary supplemental long-term savings contracts. Among these are, for example, 'Riester Pension' plans, life insurance policies and other private pension plans.

The pension reforms described above have fundamentally changed the character of German statutory pension system. Before the reforms, it was classified as a defined benefit scheme. It could now be classified as a notional defined contribution (NDC) plan.³ In an NDC plan, contributions will be placed in fictitious (notional) accounts in which they earn interest equal to the actuarial return of the pay-as-you go scheme. At retirement age, the accumulated fictitious wealth will then be transferred into an annuity.¹³ For individuals, it is now increasingly difficult to predict how much income they can expect from statutory pensions. For that reason, the statutory pension authority sends out pension statements on a yearly basis. As of 2005, anyone who is 27 years old and has been contributing to the statutory pension system for at least 5 years receives such a statement. It provides information about the expected pension entitlement in case one continues to pay contributions that are worth the average of the past 5 years until one retires. The statutory retirement age is going to increase gradually from 65 to 67 years starting 2012. In 2029, employees will generally retire at age 67. However, the statement also points to the decreasing pension level relative to wage increases, as well as to the loss of purchasing power of the accumulated wealth. Therefore, even with this statement, for many individuals, it is unclear on what to expect with regard to the future replacement rate.

Not only is the calculation of the pension gap troublesome, choosing the most appropriate

product is challenging as well. Promptly after the reforms, the financial sector reacted by offering a large variety of pension products. As many individuals have no experience with such products, they are often overwhelmed when attempting to choose the right product.

DATA AND METHOD

The empirical analysis is based on the SAVE Survey, which is a panel administered at the Mannheim Research Institute for the Economics of Aging (MEA). The aims of the panel are, among others, to improve the understanding of saving motives, investment decisions and retirement planning.¹⁴ Starting with the first wave in 2001, the SAVE Panel evolved to have stable participation since 2005. The data contain a wide range of socio-demographic and psychological variables. It is possible, for example, to explore the data on preferences, future expectations, past experience, and health status, as well as the economic conditions, including an extensive set of saving variables.

The data consist of two samples: a random sample and an access panel that are approximately the same size since 2006. The random sample was drawn in 2003 using a multiple stratified multistage random route procedure.¹⁵ In 2005, another technique was used to refresh the sample for financial reasons. Hence, a multistage procedure drawing a large sample from the community-based German population registers was used.¹⁴ The access panel is a standing panel of households surveyed at regular intervals, operated by a company called TNS Infratest TPI.¹⁴ As individuals participating in an access panel may have different characteristics that are not represented by the quota sampling scheme used to recruit individuals for the random sample, it may create sample selectivity.¹⁴ To account for this difference in the samples, a dummy regressor is included, which has a value of one if the individual participated in the random sample and zero otherwise.

Weights will be used for all descriptive statistics. They have been calculated to compare SAVE to the microcensus survey dependent on age and income.¹⁶ Weights for regression analysis

will not be used because the weights are not a function of the dependent variable, and therefore would 'reduce the precision of the estimates without really giving any extra benefit'.^{17,18}

Missing data in the German SAVE Survey have been handled by applying the Markov Chain Monte Carlo Multiple Imputation Procedure and logical panel imputation.^{19,20} The imputation procedure is repeated five times, producing five data sets. The data provided by the MEA contain five data sets with imputed variables. An additional indicator data set indicates whether a certain value is original (0) or imputed (1). Of the variables employed in this article, the variables with the most missings are the income variables for which 11.63 per cent had been imputed and the wealth variables for which between 5.8 per cent and 11.43 per cent had been imputed.

Regression results for these five data sets will be combined using Rubin's Rules to account for missing data uncertainty throughout this article.²¹ The estimated parameters are therefore the average of the complete-data parameter estimates resulting from estimating each of the five data sets separately, and the underlying variance is the sum of the within-imputation variance and the between-imputation variance.²² Regressions of this kind will be carried out in Stata with MIM, a Stata module programmed by Galati *et al.*²³

The sample size of the 2008 SAVE Survey is 2608, of which 1362 are female. The average age of the unweighted sample is 54. More descriptive statistics about all variables used can be found in Table A1.

The empirical analysis of the data will start with descriptive statistics about how savings behaviour changed from 2005 to 2008. In addition, it will be shown as to how the confidence to estimate one's future pension level changed throughout the years. Focusing on this question, it is also possible to observe how these expectations developed from 2005 to 2008. The number of individuals realizing that statutory pension entitlements may not be sufficient to maintain the standard of living during old age should have increased throughout the years. This is because ageing and decreasing pensions are

frequently discussed in the German media. Hence, individual's expectations concerning the pension level may have decreased between 2005 and 2008.

The question underlying the pension level is the following:

Please estimate: How much, as a percentage of your last expected net income, will your Statutory/state pension entitlements be?

- (a) *Estimated percentage:*
- (b) *Don't know, no estimate possible*
- (c) *Does not apply, already retired or self-employed*

Individuals who are not able to understand the implications of pension reforms may make suboptimal retirement savings decisions and end up with a retirement income that is less than they expected. A logistic regression shall investigate the characteristics that determine whether someone attempted to estimate her/his pension level or not. Unfortunately, the data do not allow the estimates to be proven correct. Nevertheless, it can be argued that individuals who tried to estimate their pension level have at least thought about their potential retirement income.

RESULTS AND DISCUSSION

Changing savings behavior

Pension reforms in 2001 and 2004 have changed the character of the German pension system and shifted more responsibility to the individual. This might correspond to a rethinking of investment decisions. The question on which Figure 1 is based asks individuals which kinds of assets they or their partner own. Figure 1 illustrates that after the pension reforms in 2001 and 2004, the number of people investing money in these saving modes has generally increased. Only the popularity of private pension plans that are not subsidized by the state has declined. A simple explanation would be that individuals want to take advantage of the 'Riester Subsidy', and therefore prefer 'Riester Pension' plans over other pension plans. From which sources of income individuals (not households) expect to

Figure 1: Investment mode.
Source: SAVE Survey Sample 2005–2008, weighted.

receive income from during old age is shown in Figure 2. An interesting finding is that the ownership of capital life insurance policies increased, but that the number of respondents reporting that they expect income from capital life insurance as additional retirement income declined (Figure 2). There are three possible explanations for this result. The first one is that the question concerning the ownership of certain assets asks at the household level and the question concerning expected retirement income asks at the individual level. Therefore, it is possible that the respondent's partner owns capital life insurance, but the respondent does not. The second explanation could be that individuals do not associate capital life insurance with retirement income. This might be because they expect to draw on their savings before the insurance is due. In Germany, every second life insurance is cancelled before the contract duration ends.²⁴ The third explanation would be that a substitution of private pension plans for capital

life insurance has taken place. This could be derived from Figure 2, which shows a decreasing importance of capital life insurance while the importance of private pensions as retirement income increased.

Almost 90 per cent of the respondents expect to receive statutory pension during old age. White- and blue-collar workers' expectations concerning the replacement rate expected from statutory pensions have increased between 2005 and 2008 (Figure 4). This is surprising, as scholars, politicians and the media have predicted a declining pension level for the future. An explanation of this development could be the reluctance of politicians to rigorously apply the pension adjustment formula. The pension adjustment formula determines the amount by which pensions increase each year. According to this formula, pension increases will be slowed down each year by an increasing factor (so-called 'Riester Factor'), which mirrors the increased requirement for supplemental private pension.

Figure 2: Expected sources of retirement income.
Source: SAVE Survey Sample 2005–2008, weighted.

In addition, the development of wages and the dependency ratio²⁵ determine pension adjustments. Since 2005, several downward adjustments of pensions have not taken place. In 2008, the government even increased pensions by delaying an increase of the ‘Riester Factor’. In the 2008, old-age provision report, the government grants that the omitted downward adjustments will be caught up from 2010 onwards.¹

Civil servants’ expectations towards their income-replacement rate have not changed notably in one or the other direction throughout the years (Figure 4). This result is not surprising given the minor changes to the state pension system for civil servants. As expected, the estimated size of the replacement rate for civil servants far exceeds the replacement rate for blue- and white-collar workers. This is in line with the research of Frick and Grabka¹¹ who concluded that pension entitlements for blue- and white-collar workers are actually only worth 40 per cent of the entitlements for civil servants.

Minor changes in the state pension system for civil servants can also be helpful to explain the

higher percentage of civil servants who felt confident to estimate their pension level compared to other employees (Figure 3). A further explanation for the higher degree of confidence for civil servants is the simple way to calculate pensions in a system of defined benefits compared to NDC in the statutory pension system for ordinary employees. Observing the percentage of individuals (not civil servants) feeling confident about their ability to estimate their replacement rate throughout the years shows that it has increased from 52 per cent in 2005 up to 62 per cent in 2007, and then dropped slightly in 2008. The increase is likely to be the result of the yearly pension statement. Of course it is not possible to determine whether their estimations are realistic, but at least they have thought about it and feel confident enough to answer this question. However, there are still about 40 per cent of the respondents who do not have an idea about how much to expect from statutory pension.

The determinants of the ability and confidence to estimate one’s replacement rate deserves further investigation because they are essential to make optimal decisions concerning additional

Figure 3: Expected net income-replacement rate.
Source: SAVE Survey Sample 2005–2008, weighted.

private pension provision. For that reason, the next section provides this information based on a regression analysis.

Who estimated the income-replacement rate?

The dependent variable is the binary variable, which indicates whether someone estimated his pension level (1) or not (0). Having a look at the question 1 in the ‘Data and method’ section, the dependent variable is one if someone gave an estimate in option (a) and zero in the case someone checked (b) ‘don’t know, no estimate possible’. The explanatory variables are chosen, on the one hand, on the basis of previous research, investigating the determinants of financial literacy among the population.^{26,27}

These variables comprise gender, age and education. And on the other hand, variables are chosen that are likely to simplify the calculation of the replacement rate. These are, for example, working full time and being a civil servant. The results of the logistic regression are depicted in Table 1.

A surprising result is that being a civil servant is only significant at the 10 per cent level, whereas the descriptive statistics suggest a sizable difference between civil servants and other employees. The percentage of civil servants estimating their income-replacement rate is approximately 20 per cent higher than the percentage of other employees estimating their replacement rate (Figure 4). Being employed full

Table 1: Logistic Regression with the probability of estimating one’s pension level as dependent variable

	Coefficients	P-value	SE
male	0.46	0.00***	0.13
age	0.02	0.00***	0.01
log_income	0.50	0.00***	0.10
low educ	reference group		
middle educ	0.11	0.43	0.14
high educ	0.40	0.02**	0.16
full-time	0.90	0.00***	0.14
civil servant	0.54	0.09*	0.32
timepreference	−0.01	0.73	0.02
random	0.06	0.60	0.12
constant	−5.06	0.00***	0.75
n	1425		

* $P < 0.10$, ** $P < 0.05$, *** $P < 0.01$.

The coefficients reported are odds ratios.

Note: Regressions are based on the SAVE Survey sample 2008.

time and earning a high income, on the other hand, are highly significant predictors of being able to estimate the replacement rate (Table 1). As civil servants are more likely to be employed full time and earning a high income, it is likely that the inclusion of these variables decreases the effect of being a civil servant. Indeed, if one omits one of these variables, the significance of being a civil servant increases. The remaining effects in the coefficient of being a civil servant can be attributed to unobserved individual characteristics that distinguish civil servants from other employees and the associated easy calculation of the income-replacement rate. These two characteristics, especially the simple pension

Figure 4: Confidence in ability to estimate expected replacement rate.
Source: SAVE Survey Sample 2005–2008, weighted.

formula, therefore seem less relevant to alleviate the calculation of the replacement rate than previously expected. Much more important is full-time employment and a high income.

A continuous work history simplifies the prediction of the pension level, especially for employees (not civil servants) covered by the statutory pension system. As this is an NDC system, it is easier to predict the future income-replacement rate if someone is permanently employed and if his/her job is secure in the long run such that future income is easy to predict. This is because individual pension entitlements are determined by the contributions during working life. Individuals working full time and earning a high income are more likely to be permanently employed than other employees, and therefore it should be easier for them to predict their replacement rate. A similar explanation can be used to explain why someone with higher education is more likely to predict his/her income-replacement rate than someone with low education (Table 1). On the one hand, highly educated individuals are less likely to lose their jobs, and on the other higher education should lead to a better understanding of the pension system and a greater ability to predict future income to help calculate the replacement rate.

Table 1, furthermore, shows that women are less likely to predict their replacement rate than men. One explanation could be that women are

generally less financially literate than men, as verified by many researchers.^{26,27} Another explanation is likely to be the discontinued working career because of parental leave, elderly care or domestic work, which makes it harder to predict future contributions to the pension system. The likelihood of predicting the income-replacement rate also increases with age. As one approaches the retirement age, individuals are more engaged with their retirement planning and future income uncertainty is less pronounced. This makes them more likely to predict their replacement rate than younger respondents. Someone who is more concerned about his future income should be more likely to be able to predict his/her replacement rate than someone who is less concerned about the future. However, the measure of time preference, as it is used in this regression, seems to have no effect on the probability to estimate the replacement rate (Table 1).

CONCLUSION

Population ageing and its destabilizing effect on the German statutory pay-as-you-go pension system have led to two major pension reforms. In the course of the ‘Riester Reform’ in 2001, the formula determining pension increases has been changed and a savings subsidy for private pension plans (‘Riester Pension’) has been introduced. The change of the pension adjustment formula

slowly decreases the pension level for future generations of pensioners. To support individuals by building up private retirement wealth to close the pension gap, the subsidy has been introduced. The second reform in 2004 adjusted the pension formula for ageing; slowing down pension increases even more if the ratio between pensioners and contributors increases. The responsibility of one's old-age security is therefore increasing slowly.

The empirical analysis of the German SAVE Survey, which examined a stable panel from 2005 onwards, has shown that the pension reforms in 2001 and 2004 may have had an effect on savings and investment decisions. The increase in the number of individuals owning a 'Riester Pension' plan and the contemporaneous decline in the popularity of ordinary pension plans between 2005 and 2008 might be attributed to the savings subsidy granted to 'Riester Pension' plans. In addition, the importance of capital life insurance as a source of retirement income has declined, whereas the attractiveness of private pension plans (including 'Riester Pension' plans) has increased.

The decision to save for retirement is likely to depend on the expectations of future pension entitlements from the statutory pension system for ordinary employees and from the state pension system for civil servants. Henceforth, it is important that individuals are able to form expectations about their future replacement rate. The empirical analysis has shown that women, individuals who are not employed full time, low educated and individuals in low paid jobs have problems in estimating their future income-replacement rate. These explanatory variables are likely to be associated with discontinuous work histories that additionally complicate the prediction of future income streams, which are the bases for the calculation of pension entitlements in an NDC system as the statutory pension system. The government, advisors from the regional pension authorities or consumer advice centres should pay special attention to these individuals and support them in making optimal savings decisions dependent on their statutory pension entitlements and their needs.

The situation is different for civil servants for whom the calculation of future pension entitlements is easy because of the defined benefit character of the system and the absence of major reforms to the state pension for civil servants. Nevertheless, it has been shown that the ease of calculating the replacement rate has only a minor effect on the probability of estimating the income-replacement rate and is less significant compared to being full-time employed. As the pension formula for the statutory pension for white- and blue-collar workers cannot be expected to become simpler in the future, the only solution is to increase the number of individuals who are able to predict their future pension entitlements by informing them about the factors that influence their entitlements. One step into the right direction is the yearly pension statements sent out to individuals insured in the statutory pension scheme. This statement documents the present value of accumulated monthly pension entitlements if the eligible person continues his/her work life as he/she did for the last 5 years. Furthermore, information provided by different autonomous (government) bodies addressed to individuals with the most problems in estimating their statutory pension entitlements may help them to form realistic expectations about future pension entitlements.

In conclusion, a change in the savings behaviour between 2005 and 2008 has taken place; however, the aim of the analysis in this contribution was not to detect any causal relationship between pension reforms and savings behaviour. The descriptive statistics only showed that savings behaviour changed and hypothesized on the reasons that savings behaviour might have changed even more, if more individuals were able to predict their future pension entitlements.

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APPENDIX

See Table A1.

Table A1: Characteristics of the SAVE Survey sample 2008

<i>Var_Name</i>	<i>Description</i>	<i>%/mean</i>	<i>Coding</i>
privpen	expecting income from private pension or capital life insurance	—	0: no private pension
male	—	52	1: private pension
age ^a	—	—	0: female
mari	married	43	1: male
educ_d1 ^b	low educ	54	20–95 years
educ_d2 ^b	middle educ	—	0: not married
educ_d3 ^b	high educ	—	1: married
lninc ^a	household net income per month	—	0: not low education
wealth ^c	net wealth	36	1: low education
wealth_q1	first quartile	—	0: not middle education
wealth_q2	second quartile	36	1: middle education
wealth_q3	third quartile	—	0: not high education
wealth_q4	fourth quartile	—	1: high education
ciser	civil servant	28	€0–€20 000
self	self-employed	2249	≤ 10
pubs	company pension for public servants	140.593	10–52.898
		—	52.898–200.463
		—	> 200.463
		—	0: not civil servant
		4	1: civil servant
		—	0: not self-employed
		13	0: no pension
		—	1: having pension
		—	1: having pension
copen	company pension	—	0: no pension
		14	1: having pension
timepref ^a	time preferences	6.7	'0' living for the moment to '10' planning for the future
expeco ^a	expected own future economic situation	5	'0' very negative to '10' very positive
random	random sample	—	0: access panel
		42	1: random sample
risk ^a	risk aversion in money management	2	'0' risk averse to '10' risk loving

N=2608

^aMean instead of percentage is reported.

^bLow or middle education is generally required to start an apprenticeship. It is also possible for these individuals to continue education in order to receive a higher educational degree. For access to undergraduate studies at a university, a high degree is required.

^cWealth is all assets (savings account, building savings contract, stocks, bonds, real estate, not pension wealth) minus all debts (consumer credit and all other kind of credits, building loan, mortgages).