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Save the Best for Last?

On the differences in attitude towards retirement benefits among employees of different ages

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Abstract: Awareness and knowledge of pension varies between old and young employees. Of the Dutch population between 21 and 34 years old, 75 percent admit to being completely unaware of their pension status. As a result, they risk receiving a lower pension after retirement than they expect. This study examines whether and how the attitude towards retirement benefits and preferences for retirement plan features varies among employees of different ages.

An analysis of cross-sectional data from the Global Attitude Benefits Survey, provided by Willis Towers Watson, reveals that the attitude towards retirement benefits and preferences for retirement plan features varies significantly between older and younger employees. Furthermore, this study finds that older employees are more risk-averse than younger employees in their preferences for retirement plan features. The study contributes to the development of personalised pension schemes specific to the individual needs and preferences of employees.

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1. Introduction

An age gap exists among Dutch employees with respect to their attitude towards pensions. The importance of pension for young people is minimal, and a clear difference exists in the attitude towards and knowledge of pension between people of different ages (Aegon, 2013).

A pension is one of the most important financial products for the majority of Dutch employees (AFM, 2012). It is thus essential that participants in a pension plan be aware of their pension's current status. They can then anticipate a situation where their income at retirement is insufficient (AFM, 2012). However, in general, Dutch employees, especially young employees, do not always possess this attitude (Wijzer in geldzaken, 2014). Retirement benefits comprise a significant component of an employee's working conditions; however, these benefits do not always draw enough attention from employees (Weerts - van Delft & Vermeulen, 2016).

According to a report about the attitude towards pension in 2009, a large proportion of young Dutch employees were unaware of or uninterested in their pension status. Of the population of Dutch people between the ages of 21 and 34, 75 percent were completely ignorant of their pension status (Wijzer in geldzaken, 2009).

Moreover, a few years later it was reported that the percentage of Dutch people between the ages of 25 and 34 who had never considered their pension had increased from 32 percent in 2008 to 53 percent in 2014 (Wijzer in geldzaken, 2014). This increase happened despite enormous publicity being given to retirement benefits during this period (AFM, 2015).

Dutch employees prefer not to contemplate being old and retired. Given their collective disinterest, they are not motivated to find out about retirement benefits. However, 33 percent of the people in the Netherlands risk receiving a lower pension than they expect (AFM, 2015). This fact is sufficient reason for young employees to change their attitude towards retirement benefits. Therefore, the aim of this study is to investigate how the attitude towards retirement benefits and preferences for the various features of these benefits vary for employees of different age groups.

Differences in attitude, interest and knowledge concerning retirement benefits are key drivers for the development of personalised retirement benefits (Van Soest, 2016). The provision of such benefits is an upcoming trend in the Netherlands and improves working conditions by suiting the personal needs of an individual. Personalised benefits do not imply providing each employee with personalised working conditions but offering working conditions which fit different lifestyles and life phases (Weerts - van Delft & Vermeulen, 2016). This thesis contributes to the development of personalised benefits and entails research on how attitudes towards retirement benefits and preferences for certain retirement plan features vary by age among Dutch employees.

1.1. Background

1.1.1. The attitude of Dutch employees towards retirement benefits

In general, Dutch employees do not perceive retirement to be an interesting topic. A study by Visser et al. (2012) has revealed that 71 percent of Dutch employees are not interested in acquiring information about retirement. Moreover, according to the annual pensions monitor, in 2014, about half of the Dutch population agreed that they should be more interested in retirement benefits. However, only 11 percent of the respondents actually made regular efforts to gain information about their pension (Wijzer in geldzaken, 2014).

More specifically, it was found that the motivation to learn about retirement benefits varies for employees of different ages in the Netherlands. Employees above 50 years old are more interested in and informed about their pension, have greater knowledge about pensions in general, are more aware of their pension status and take greater action to lead a lifestyle after retirement similar to their current one (Wijzer in geldzaken, 2014). Also, it was revealed that older employees are more satisfied with and informed about their retirement benefits and the size of their pension (Van Soest, 2016).

Furthermore, Van Raaij et al. (2011) conducted research on how knowledge about pensions differs by age. They surveyed Dutch individuals for pension awareness and knowledge. Of Dutch employees between 24 and 35 years old, 76 percent were completely unaware of their pension, and only 6 percent were fully informed. With respect to older employees, 54 percent of those between 50 and 65 years old had no knowledge about

their pension, while 18 percent were fully informed (Van Raaij, Huiskes, Verhue, & Visser, 2011).

In other countries as well, such as the USA, it is seen that younger and older employees differ in their attitude towards retirement benefits (Van Eekelen, Van Rossum, Smits, & Wit, 2015). Research indicates that as employees approach retirement age, retirement benefits assume greater importance (Ekerdt, Hackney, Kosloski, & DeViney, 2001), and older people are more likely than younger employees to have a retirement account (Hira, Rock, & Loibl, 2009; Helman, VanDerhei, & Copeland, 2007).

1.1.2. Characteristics associated with differences in attitude towards retirement benefits

As mentioned, the attitude towards retirement benefits is related to age. Various studies have investigated which personal characteristics other than age affect the attitude of Dutch employees towards retirement benefits. According to Wijzer in Geldzaken (2009, 2014) and Van Raaij et al. (2011), the attitude towards retirement benefits is affected by a person's gender, income, education and household situation. The findings of these studies are summarised in the following paragraph.

First, the findings reveal that employees with a higher income have greater knowledge about pensions than employees with a lower income. A higher income increases the size of an employee's pension. As a result, an employee with a higher income, and thus a higher pension, is more interested in information about pensions. Second, since a male is more often the main wage earner in a household and has a higher income, males have greater knowledge than females about pensions in general. Third, this knowledge is positively related to the level of education, and employees who are more highly educated have greater knowledge of pensions. Finally, employees that live in a household with more than two persons or children have less knowledge about pensions than employees who live in a one-person household (Van Raaij, Huiskes, Verhue, & Visser, 2011; Wijzer in geldzaken, 2009, 2014).

When it comes to gender, women plan for retirement less frequently than men even though women live healthier and longer lives. Consequently, women have fewer economic resources when they retire. The traditional roles of women in society, which emphasise

inferiority, dependency and passivity, were cited as possible reasons for this problem (Perkins, 2008).

With respect to an employee's household situation, households increase the contribution to a retirement plan and retirement benefits become more important to employees when the children leave home (Munnell, Dushi, Sanzenbacher, & Webb, 2015).

Another factor that affects an employee's attitude towards retirement benefits is financial literacy (Prast & van Soest, 2016). Financial literacy is defined as the ability to make and manage your own money (Giesler & Veresiu, 2014). According to Prast and van Soest (2016), employees who are conscious of their personal finances and manage them well are also more likely to be aware of and satisfied with their pension.

1.2. Research question and hypotheses

Interest in information about retirement benefits tends to be low. Younger people, especially, focus less on retirement (Visser, Oosterveld, & Kloosterboer, 2012). However, retirement benefits deserve greater attention since 33 percent of the people in the Netherlands risk receiving a lower pension than expected (AFM, 2015). This study aims to examine the association between employees' ages and their attitude towards retirement benefits in the Netherlands. Furthermore, this study investigates various details to highlight the association between the ages of employees and their preferences for several features of a retirement plan.

The data set used for this study is the Global Benefits Attitudes Survey (GBAS), provided by Willis Towers Watson. Since the focus of this thesis is on the attitude towards retirement benefits of employees in the Netherlands, the Dutch sample of the GBAS utilised. It will be elaborated upon in the Data section. In the survey, respondents were asked several questions concerning their retirement plan. I originally planned to study how the attitude towards retirement benefits differs among employees of different ages by measuring the current importance of retirement for respondents. Unfortunately, no question in the survey qualified as appropriate for this measure. Therefore, other questions in the survey were identified that could be utilised as a measure of the respondents' attitude towards retirement benefits.

Eventually, three questions were selected as a measure of an employee's attitude towards retirement benefits, and one as a measure of the employee's preference for certain features of the retirement plan. These four questions were used to form five hypotheses. The attitude towards retirement benefits is defined as the overall opinion about retirement plans as a combination of the three measures used in the survey. This attitude can best be summarised as follows: Was the retirement plan an important reason to join an employer? How satisfactory is the retirement plan? Would the employee spend additional money on the retirement plan?

The four questions used for these measures and to form the hypotheses are elaborated upon in the Data section and discussed briefly in the following paragraphs.

First, the respondents were asked which working conditions were important reasons to join their current employer. This backward-looking question helps examine whether the respondents perceived the retirement benefits offered to be an important factor in signing a contract with their current employer, and whether this perception was affected by age. However, if pension is a standard component of working conditions, it is likely that the respondents would not select retirement benefits as an important reason, although pension could still be important to them. On this basis, the following hypothesis is formulated:

Hypothesis 1: The retirement plan offered was more often an important reason for older employees to join their current employer than it was for younger employees.

Second, the respondents were asked how satisfied they were with their retirement plan. This question helps investigate the extent to which this satisfaction is affected by age. According to Van Soest (2016), older people are associated with higher satisfaction with retirement plans. This is also the expectation of this study. Therefore, the following hypothesis is tested:

Hypothesis 2: Older employees are more satisfied with their retirement plans than younger employees are.

Third, the respondents were asked how important the availability of certain options was if they had an allowance to spend on a variety of benefits. In other words, the respondents had to indicate the benefits for which they would like to receive additional units. It has been found that older people take more steps to ensure a lifestyle after retirement similar to the one they currently enjoy (Wijzer in geldzaken, 2014). I therefore expected that more frequently than younger people, older people would choose to spend their allowance on retirement plans. On the basis of this understanding, the following hypothesis is formulated:

Hypothesis 3: If employees are offered an allowance to spend on a variety of benefits, older employees will choose to spend it on retirement benefits more often than younger ones will.

Fourth, employees' preferences for certain features of the retirement benefits package were measured. Five sets of two different features of the pension were presented to the respondents. They had to indicate on a 7-point scale which of the two features they preferred. Using this measure, the following hypothesis is tested:

Hypothesis 4: Older employees' preferences for certain features of the retirement benefits package are different from those of younger employees.

Finally, this study examines whether the attitude towards retirement benefits relates to an employee's financial literacy. Previous research reveals that there is a positive association between the two (Prast & van Soest, 2016). Two statements from the survey indicate the respondent's financial literacy. Using these indicators, it is examined whether the attitude towards retirement benefits is affected by how conscious employees are of their personal finances. The following hypothesis is tested:

Hypothesis 5: Employees who are conscious of their personal finances have a different attitude towards retirement benefits than employees who are not.

The aim of this study is to investigate the association between employees' age and their attitude towards retirement benefits and preferences for certain features of the retirement plan. By testing the five hypotheses, I aim to answer the following research question:

***Research question:** 'Do attitudes towards retirement benefits and preferences for certain features of the retirement plan vary for employees of different ages?'*

To answer this research question and test the hypotheses, a cross-sectional, empirical analysis was conducted. In the next section, the data used to execute this analysis is described. After this, the methodology is presented, followed by an overview of the results. Finally, the conclusions are discussed, after which the limitations and recommendations are presented.

2. Data

2.1. Data source

The cross-sectional data used for empirical analysis has been provided by Willis Towers Watson (WTW), a global advisory, broking and solutions company. The company also conducts the Global Benefits Attitudes Survey (GBAS), data from which is used in this study.

The GBAS reveals employees' plans for retirement on a two-year basis. Willis Towers Watson has surveyed employees about retirement for 10 years now. The survey is conducted by an external office, the name of which cannot be mentioned due to privacy reasons. This office uses their own panel for the survey, and thus, respondents who participate in this survey are not necessarily employees of WTW's clients.

The survey used for this study was conducted from June to August 2015. Nearly 30,000 employees from 19 countries were surveyed (Table 1). This study focusses on the attitude towards retirement benefits in the Netherlands. For this reason, the analysis for this research is limited to the data from the Dutch GBAS, with a sample size of 1,006 employees. Furthermore, I solely had access to the data set with the Dutch sample for the empirical analysis because WTW can only provide me the data set of the Netherlands. Hence, utilizing the data set of the GBAS worldwide was not possible.

Table 1. Willis Towers Watson's Global Benefits Attitudes Survey 2015/2016. ± 30,000 employees, 19 countries.

Americas	<i>Responses</i>	Europe	<i>Responses</i>	Asia Pacific	<i>Responses</i>
Argentina	1,508	France	1,007	Australia	1,006
Brazil	1,004	Germany	2,281	China	2,005
Chile	1,005	Ireland	758	India	2,003
Colombia	1,001	Netherlands	1,006	Japan	2,002
Mexico	1,011	Turkey	1,031	Philippines	1,010
Canada	2,013	UK	1,895	South Korea	1,000
US	5,083				

According to WTW, the survey includes representative samples of non-government employees. However, of the respondents, 62 percent were male and 38 percent female, whereas the percentage of women in the Dutch private sector was 47 percent in 2015 (CBS). Hence, the representativeness of the survey with respect to gender is questionable.

The respondents were active in 22 markets and worked for medium and large private-sector companies.

The age of the respondents was between 19 and 69 years with an average of 46. The entire sample of 1,006 employees can be divided into five age groups: 18 to 30, 31 to 40, 41 to 50, 51 to 60 and 61 to 70 years. The sample size of each age group is displayed in Figure 1.

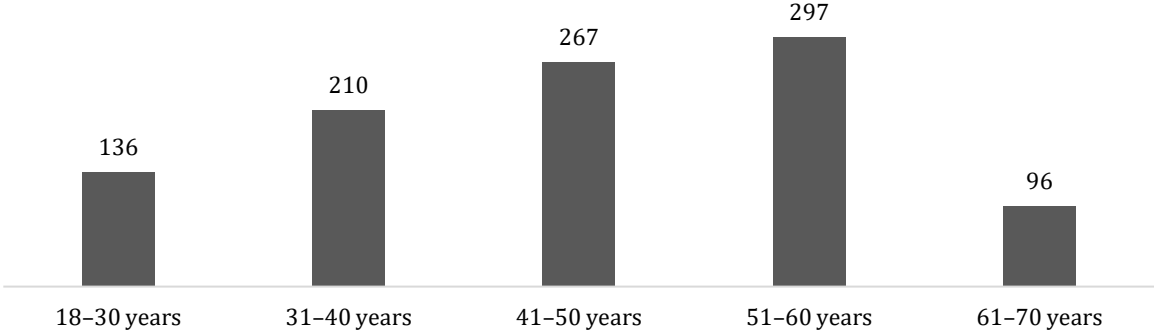


Figure 1. Distribution age groups and corresponding sample size.

2.2. Dependent variables

For the empirical analysis, four types of dependent variables were retrieved from the GBAS. To examine how the attitude towards retirement benefits and preferences for retirement plan features vary for employees of different ages, four questions from the survey were selected and used as dependent variables.

2.2.1. Retirement plan as an important reason for joining an employer

The first question measures employees' reasons for choosing their current employer.

Question 1 (Q_1): *Please select the most important reasons you joined your current employer.*

In response to this question, the respondents selected a minimum of one and a maximum of three of ten types of working conditions. The variable Q_1 has the value 1 if the related working condition is selected by an employee as an important reason to join the current

employer, and 0 otherwise. The types of working conditions and corresponding descriptive statistics are displayed in Table 2.

Table 2. Descriptive statistics working conditions Q₁. N = 1006

#	Variable	Mean	S.D.	(Min, Max)
1.	Challenging work	0.53	0.50	(0, 1)
2.	Job security	0.33	0.47	(0, 1)
3.	Work-life balance	0.28	0.45	(0, 1)
4.	Employer’s reputation as a good place to work	0.25	0.43	(0, 1)
5.	Base pay and bonus	0.24	0.43	(0, 1)
6.	Opportunities for promotion	0.22	0.41	(0, 1)
7.	Retirement plan	0.21	0.41	(0, 1)
8.	It was the only job available to me	0.15	0.35	(0, 1)
9.	Good relationship with manager	0.07	0.25	(0, 1)
10.	Vacation or paid time off	0.07	0.25	(0, 1)

As seen, the working condition selected by most respondents was challenging work, with a mean of 0.53. This implies that more than half the respondents specified challenging work as an important reason to join their current employer. Job security and work-life balance were the other two working conditions chosen most frequently. However, the means of these two conditions are much lower than that of the first choice, challenging work.

It is interesting to note that the four working conditions selected by most respondents are not related to wages or financial benefits. The first such type of working condition is base pay and bonus at fifth place in the ranking, with a mean of 0.24. This implies that less than a quarter of the respondents perceived salary as one of the most important reasons to join their current employer. Instead, employees appear to focus more on challenging work, job security and work-life balance than on the financial benefits related to a job. However, it is reasonable to assume that the wages offered to an employee with certain competencies will not vary greatly across different jobs. This may be why base pay is not necessarily a crucial factor in deciding which employer to work for.

Retirement benefits are ranked seventh with a mean of 0.21. This implies that many of the respondents did not consider these benefits to be one of the most important reasons to join their current employer. However, this mean is quite close to those of base pay and bonus, and opportunities for promotion. Furthermore, a retirement plan is often standard

in the compensation package of Dutch employees. Retirement plans can therefore still be important for an employee without being a crucial factor in choosing a job.

2.2.2. Retirement plan satisfaction

Employees' satisfaction with their retirement plans is gauged from their responses to the following question:

Question 2 (Q_2): *How satisfied are you with the following?*

In response to this question the respondents rated eight aspects of their job on a 5-point scale: very dissatisfied (1), dissatisfied (2), neutral (3), satisfied (4) and very satisfied (5). The job characteristics and corresponding descriptive statistics are displayed in Table 3.

Table 3. Descriptive statistics answer possibilities Q_2 . N = 1006 (Exception: Retirement plan N=905)

#	Variable	Mean	S.D.	(Min, Max)
1.	Relations with work colleagues	4.12	0.68	(1, 5)
2.	Current job overall	3.78	0.70	(1, 5)
3.	Relations with your manager	3.73	0.89	(1, 5)
4.	Work-life balance	3.70	0.85	(1, 5)
5.	Retirement plan	3.58	0.74	(1, 5)
6.	Job security	3.52	0.94	(1, 5)
7.	Pay and bonus	3.49	0.88	(1, 5)
8.	Career advancement opportunities	3.20	0.96	(1, 5)

Generally, the respondents seemed to be quite satisfied with their jobs since all the means are greater than 3, which implies that the satisfaction about a certain job characteristic is higher than neutral. On average, the respondents were most satisfied with their relations with colleagues (4.12) and least satisfied with career advancement opportunities (3.20). The mean of respondents' satisfaction with their retirement plan is 3.58, implying that respondents on average were between neutral and satisfied with their retirement plan.

2.2.3. Allowance to spend on the retirement plan

A third question measures the extent to which certain benefits are important to employees such that they would like to have additional units of these benefits. Hence, this question measures the marginal value of the benefit for the employee.

Question 3 (Q_3): *If your employer provided you with an allowance to spend on a variety of benefits, how important would it be to have the following available to you?*

In response to this question, the respondents were asked to rate six types of benefits on a 5-point scale: not at all important (1), not too important (2), moderately important (3), important (4) and very important (5). The benefits to be rated and the corresponding descriptive statistics are displayed in Table 4.

Table 4. Descriptive statistics answer possibilities Q_3 . N = 1006

#	Variable	Mean	S.D.	(Min, Max)
1.	Retirement plan	3.88	0.84	(1, 5)
2.	Medical protection	3.43	0.95	(1, 5)
3.	Life and disability insurance	3.40	0.91	(1, 5)
4.	Financial protection and insurance	3.02	1.00	(1, 5)
5.	Employee discounts	2.94	1.06	(1, 5)
6.	Wellness programs	2.87	1.06	(1, 5)

In this case, the retirement plan is ranked first with a mean of 3.88. This implies that if respondents had an allowance, a majority of them would prefer to spend it on their retirement plan.

2.2.4 Preferences for retirement plan features

To test whether older employees' preferences for features of a retirement plan are different from those of younger employees, a fourth question from the survey was used:

Question 4 (Q_4): *If you were offered the following choices about your retirement plan, which would you prefer?*

The respondents had to indicate their preference for option A or option B in five cases (see Table 5). The employees could indicate their preferences from seven possibilities: strongly prefer A (1), prefer A (2), slightly prefer A (3), neutral (4), slightly prefer B (5), prefer B (6) and strongly prefer B (7).

Table 5. Descriptive statistics cases and choice options Q₄. N = 1006

Case #	Choice options	Mean	S.D.	(Min, Max)
1	A. When I retire I receive a regular monthly payment that is guaranteed to last for the rest of my life.	2.63	1.63	(1, 7)
	B. When I retire I receive a fund of money (which I can invest, leave to children, access when I want) but which could run out.			
2	A. A guaranteed amount I can expect when I retire, with no chance of higher or lower returns.	2.70	1.41	(1, 7)
	B. Having a higher value in most years but being worse off when financial markets decline significantly			
3	A. Make my own decisions but face the financial risks from managing my own retirement savings.	4.13	1.52	(1, 7)
	B. Share the financial risks with others in my retirement plan, but without making my own decisions.			
4	A. I choose the way my retirement moneys are invested.	4.14	1.70	(1, 7)
	B. My retirement plan selects appropriate options for me.			
5	A. Being able to access my pension savings before retirement, to be used for health or housing needs, but with a less generous pension at retirement	4.60	1.82	(1, 7)
	B. Not being able to access my pension savings before I retire but receiving a more generous pension at retirement.			

On average, in Case 1, the respondents preferred to receive a regular monthly payment guaranteed for the rest of their lives (option A) instead of receiving a fund of money at retirement that might run out (option B). In Case 2, the respondents preferred to receive a guaranteed amount when they retired with no chance of higher or lower returns (option A), rather than receiving a guaranteed amount each year with the risk of being worse off if financial markets fell (option B). The means of these cases (2.6 and 2.7, respectively) lie between 2 and 3, implying that a majority of the respondents preferred or slightly preferred option A to B.

Conversely, the means of the third, fourth and fifth cases are 4.1, 4.1 and 4.6, respectively – that is, between 4 and 5. This reveals that the average respondent was neutral about the two options presented in these cases or slightly preferred option B to A. In Case 3, on average, respondents slightly preferred to not make decisions themselves about retirement savings but share the financial risks (option B), rather than face these risks but make their own decisions (option A). Additionally, in Case 4, the employees slightly preferred to let their retirement plan decide how their retirement moneys were invested (option B) instead of making the decision themselves (option A). Finally, in Case 5, respondents would rather not have access to their pension savings before retirement but receive a more generous pension (option B) than have this access but receive a less generous pension (option A).

2.3. Independent variables

The literature reveals that people’s attitude towards retirement benefits can be affected by several personal and job characteristics such as age, gender, household situation, income and education (Wijzer in geldzaken, 2009, 2014; Van Raaij, Huiskes, Verhue, & Visser, 2011). Therefore, the control variables used for empirical analysis were *age*, *gender*, *children* and *wage*. Unfortunately, *education* was not available in the data set. Otherwise, it would have been included in the set of control variables.

The variable *age* is measured in years, and the dummy variable *gender* has the value 1 for male and 2 for female respondents. For the variable *children*, the respondents indicated how many children younger than 18 lived in their household: 0, 1, 2, 3 or 4 or more.

For the variable *wage*, the respondents had to specify their wage range in euros across the wage groups displayed in Table 6.

Table 6. Wage groups in Euros GBAS. N=856

Wage group	Wage (€)	Wage group	Wage (€)
1.	7,500 – 15,000	6.	65,000 – 79,999
2.	15,000 – 24,999	7.	80,000 – 99,999
3.	25,000 – 34,999	8.	100,000 – 124,999
4.	35,000 – 49,999	9.	125,000 – 159,999
5.	50,000 – 64,999	10.	160,000 – 240,000

The variable *wage* is measured as the upper limit of this group. Hence, if this variable has the value 64,999, the wage of the relevant respondent is between 50,000 and 64,999. Some of the respondents may not have wished to disclose how much they earned, because of which some values for this variable are missing. The wage ranges and their corresponding sample sizes are displayed in Figure 2.

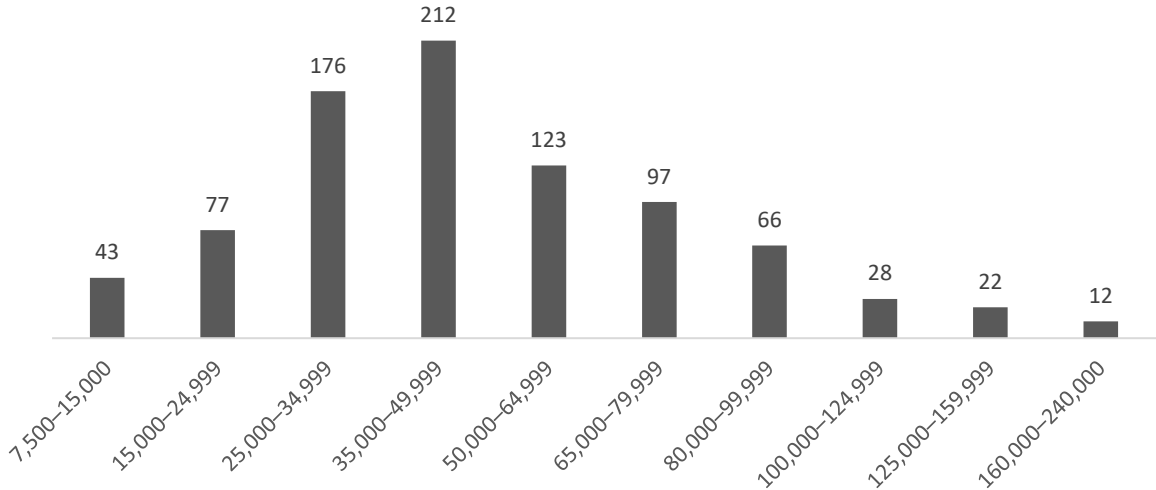


Figure 2. Distribution wage ranges (€) and corresponding sample size. N = 856

Additionally, Hypothesis 5 postulates that retirement benefits are more important to employees who are conscious of their personal finances than to employees who are not – that is, financial literacy affects the attitude towards retirement benefits. To test this hypothesis, responses indicating to what extent respondents agreed or disagreed with certain statements concerning financial literacy were examined. Two of these six statements have been used in other financial literacy questionnaires such as the ‘OECD INFE Measuring Financial Literacy Questionnaire, 2011,’ and the ‘Central Council for Financial Services Information Financial Literacy Survey, 2016’. I have, therefore, categorised the following two statements as indicators of financial literacy:

Indicator 1: *Before I buy something I carefully consider whether I can afford it.*

Indicator 2: *I always pay my bills on time.*

The respondents had to rate these statements on a 5-point scale: strongly disagree (1), disagree (2), neutral (3), agree (4) and strongly agree (5). These ratings provide an

indication of the employee's level of financial literacy. The means of the financial literacy variables are close to 4 at 3.9 and 4.2, respectively. From these figures, it appears that most respondents carefully consider the affordability of their purchases and pay their bills on time, and thus, are quite conscious of their personal finances. Descriptive statistics of the independent variables are displayed in Table 7.

Table 7. Descriptive statistics independent variables.

Variable	Obs.	Mean	S.D.	(Min, Max)
Age	1006	45.57	11.58	(19, 69)
Gender	1006	1.38	0.49	(1, 2)
Children	1006	0.50	0.87	(0, 4)
Wage (x1000)	856	60.26	37.26	(15, 240)
Fin. Lit. Indicator. 1	1006	3.86	0.79	(1, 5)
Fin. Lit. Indicator. 2	1006	4.24	0.75	(1, 5)

Furthermore, partial correlations between the variables of interest are presented in the matrix in Table 8. I focus on the correlations between the dependent variables (Q_1 , Q_2 and Q_3) and *age* because these variables are relevant to the research question and hypotheses.

Table 8. Partial Correlation Matrix (Pearson's Correlation Matrix).

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Q_1	-								
2. Q_2	0.07	-							
3. Q_3	0.08*	0.02	-						
4. <i>Age</i>	0.11*	0.05	0.10*	-					
5. Gender	-0.01	-0.01	-0.04	-0.12*	-				
6. Children	-0.03	-0.00	-0.04	-0.16*	-0.03	-			
7. Wage	0.02	0.19*	0.07	0.15*	-0.29*	0.13*	-		
8. Fin. Lit. 1	0.02	-0.02	0.10*	0.01	0.03	-0.03	-0.17*	-	
9. Fin. Lit. 2	0.03	0.06	0.13*	0.02	-0.00	-0.11*	0.12*	0.21*	-

Notes: N = 1006 (Exceptions: Q_2 N=905, Wage N=856).

Data Source: Global Benefits Attitudes Survey 2015-2016 by Willis Towers Watson.

* Significant at 1% significance level ($p \leq 0.01$).

The partial correlation between *age* and another variable is statistically significant ($P = 0.00$) only in association with the dependent variables Q_1 (correlation coefficient of 0.11) and Q_3 (correlation coefficient of 0.10). A possible reason for this positive relationship between *age* and the dependent variables Q_1 and Q_3 is the underlying relationship

between each of those variables and the other control variables. *Age* is significantly associated with the variables *gender*, *children* and *wage*; however, the dependent variables Q_1 and Q_3 are not. I therefore assume that the correlation between Q_1 , Q_3 and *age* is not due to an underlying relationship, and that the association between these variables is not biased because of a possible underlying relationship.

3. Methodology

In this section, the methods used for empirical analysis are described. Multiple regression analysis with cross-sectional data (OLS) was conducted. The data set was complete and clean, since WTW had already used it for their own research. Therefore, no outliers or observations with missing values were removed from the data set.

3.1. Cross-sectional analysis for Hypotheses 1, 2 and 3

First, Model 1 was used to test Hypotheses 1, 2 and 3. This model examines the linear association between a respondent's age and the person's attitude towards retirement benefits. More specifically, it examines the association between the employee's age and the dependent variables Q_1 , Q_2 and Q_3 .

As discussed previously, Q_1 checks whether an employee selects the retirement plan as an important reason to join the current employer (Hypothesis 1). Second, Q_2 indicates the extent to which respondents are satisfied with their retirement plan (Hypothesis 2). Third, Q_3 helps investigate how important the availability of a retirement plan is for respondents if provided an allowance to spend on a variety benefits (Hypothesis 3). Model 1 is as follows.

Model 1: $Y(Q_i)$

$$= \beta_0 + \beta_1(Age) + \beta_2(Gender) + \beta_3(Children) + \sum_{i=1}^{10} \beta_i Wagegroup_i + \varepsilon$$

In all models, Q_i denotes which question – Q_1 , Q_2 or Q_3 – is used as a dependent variable in the regression. As mentioned in the Data section, *gender*, *children* and *wage* are added as control variables.

Since the variable *wage* is categorised in 10 wage groups (Table 6), a dummy variable is created for each wage category with the number of the relevant range. For instance, the first wage range (7,500–15,000 euros) is denoted by the dummy variable *Wagegroup₁*. This dummy variable has the value 1 if the respondent is part of this wage group and 0 otherwise. The dummy variable of the fourth wage group (35,000–49,999 euros) is considered the base category because this group is the median and contains the largest

proportion of respondents. The coefficients in the regression output are the differences between the coefficient of this base category and the dummy coefficients of the other wage groups.

Furthermore, to analyse the nonlinear association between an employee's age and the person's attitude towards retirement benefits, the differences between the various age groups are examined using Model 2. This model is similar to Model 1, except that the variable *age* is replaced by the dummy variables of the various age groups. Model 2 is as follows.

Model 2: Y(Q_i)

$$= \beta_0 + \sum_{i=1}^5 \beta_i \text{Agegroup}_i + \beta_2(\text{Gender}) + \beta_3(\text{Children}) \\ + \sum_{i=1}^{10} \beta_i \text{Wagegroup}_i + \varepsilon$$

As mentioned in the Data section, the entire sample is divided into five age groups: (1) 18–30, (2) 31–40, (3) 41–50, (4) 51–60 and (5) 61–70 years. For each age group, a dummy variable is generated. The dummy variable *Agegroup_i* has the value 1 if the respondent is part of the relevant age group, and 0 otherwise. The sample size of all the different groups is displayed in Figure 2 in the Data section. The dummy variable of the age group 41–50 years is considered to be the base category because it is the middle group, and the median (46) and mean (45.6) lie within this group.

In the Results section, it is revealed that if the coefficients of the dummy variables for age group are plotted, an association is found to exist between the dummies and the dependent variables (*Q₁*, *Q₃*) which is close to linear. For this reason, I used the linear term of the *age* variable in Model 1 for successive regression analyses.

3.2. Cross-sectional analysis for Hypothesis 4

Model 1 was also used to examine how preferences for working conditions were different for employees of different ages (Hypothesis 4). For these regression analyses, the five cases of *Q₄* (described in Table 5) were used as dependent variables. As the coefficient of

age increases, the employee's preference shifts towards option B from option A. The shift in preference is reversed when the coefficient decreases.

3.3. Cross-sectional analysis for Hypothesis 5

The association between the financial literacy of the employee and the attitude towards retirement benefits (Hypothesis 5) was tested using Model 3. This model is similar to Model 1, except that the financial literacy variable is included in the regression. Model 3 is as follows.

Model 3: $Y(Q_i)$

$$\begin{aligned} &= \beta_0 + \beta_1(\text{Financial Literacy}) + \beta_2(\text{Age}) + \beta_3(\text{Gender}) \\ &+ \beta_4(\text{Children}) + \sum_{i=1}^{10} \beta_i \text{Wagegroup}_i + \varepsilon \end{aligned}$$

A higher coefficient for the financial literacy variable implies that the employee is more likely to agree with the statement concerning financial literacy. Hence, a higher coefficient of financial literacy means that employees who are more conscious of their personal finances are also more likely to consider the retirement plan an important reason to join their current employer, be satisfied with their retirement plan and spend any additional allowance provided on their retirement plan.

4. Results

In this section, the OLS results from the models presented in the previous section are discussed. These models include four types of regression with the three retirement-plan variables and the different retirement-plan features as dependent variables. The control variables are *age*, *gender*, *children* and *wage*. The regression analyses were run with and without wage dummies. Additionally, the final regression analysis was controlled for the financial literacy of the employees.

4.1. Associations between age and the attitude towards retirement benefits

First, a test was run to examine whether the retirement plan was an important reason to join a current employer more often for older employees than for younger employees (Hypothesis 1). If the mean of Q_1 approaches 1, the retirement plan is more likely to have been perceived as an important reason to join the current employer. The regression output of Model 1 is displayed in Table 9.

The results reveal that the association of the coefficient of *age* (0.004) with Q_1 is statistically significant ($P = 0.00$). Thus, older employees do consider the retirement plan an important reason to join an employer more often than younger ones do. This implies that an increase of *age* by 1 increases the likelihood (of an employee perceiving the retirement plan as an important reason to join the current employer) by 0.004 points on a 1-point scale. This equals 0.4 percentage points. For an age difference of 50 years, the likelihood increases by 20 percentage points. On the basis of this result, Hypothesis 1 is confirmed.

Second, it was examined how age is associated with the employees' satisfaction with their retirement plan (Hypothesis 2). If the value of Q_2 increases, the respondent is more satisfied with the retirement plan. According to the results, the coefficient of *age* has the value 0.002 but is not statistically significant. Therefore, Hypothesis 2 cannot be confirmed based on this result.

Third, the association between an employee's age and how important the availability of a retirement plan is for the respondent to spend an allowance on (Q_3) is examined (Hypothesis 3). It is more likely that an employee would spend the allowance on a retirement plan if the value of Q_3 is close to 5. The results reveal that the association

between *age* and Q_3 (0.006) is statistically significant ($P = 0.01$). It is likelier that an employee one year older would prefer to spend an additional allowance on a retirement plan. This also implies that an increase of 1 year in the age of the employee increases this likelihood by 0.006 points on a 5-point scale, which equals 0.12 percentage points. For a 50-year age difference, it equals 6 percentage points. Based on this result, Hypothesis 3 is confirmed.

Table 9: Linear regression output Model 1(Hypotheses 1, 2 and 3).

Variable	Q ₁ (Retirement plan)		Q ₂ (Retirement plan)		Q ₃ (Retirement plan)	
Age	0.004*** (0.001)	0.004*** (0.001)	0.002 (0.002)	0.003 (0.002)	0.006** (0.002)	0.006*** (0.002)
Gender	0.016 (0.028)	0.005 (0.026)	0.072 (0.053)	-0.009 (0.051)	-0.032 (0.058)	-0.049 (0.055)
Children	-0.007 (0.015)	-0.006 (0.015)	-0.120 (0.029)	0.004 (0.029)	-0.030 (0.031)	-0.024 (0.031)
Wage dummies	Yes	No	Yes	No	Yes	No
R ²	0.021	0.012	0.041	0.003	0.018	0.011

Notes: N = 1006.

Data Source: Global Benefits Attitudes Survey 2015-2016 by Willis Towers Watson.

* Significant at 10% significance level ($0.1 > p \geq 0.05$)

** Significant at 5% significance level ($0.05 > p \geq 0.01$).

*** Significant at 1% significance level ($p \leq 0.01$).

None of the associations between the control variables and the dependent variables was found to be statistically significant except those for some of the wage dummies. In association with Q_2 , a majority of the coefficients of the wage dummies are significant. Hence, there seems to be an association between employees’ wages and their satisfaction with their retirement plan. With respect to the association between *wage* and Q_1 and Q_3 , in each case, only one wage dummy is significantly correlated with the dependent variable. The coefficients of the wage dummies and their confidence intervals are displayed in Figure 3. When the wage dummies are excluded, no important differences exist for the coefficients of age. The level of significance remains the same, and the changes in size of the coefficients are negligible.

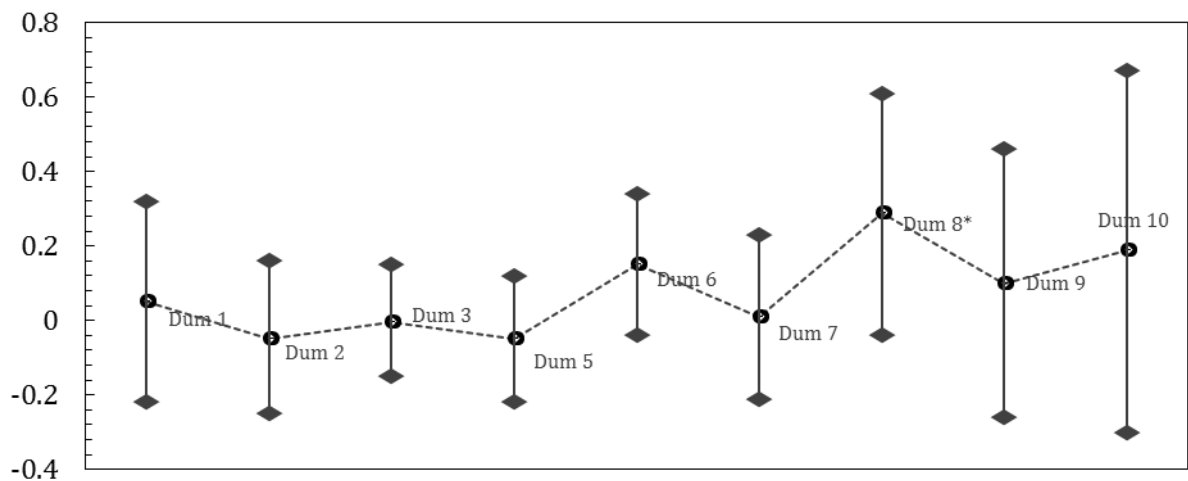
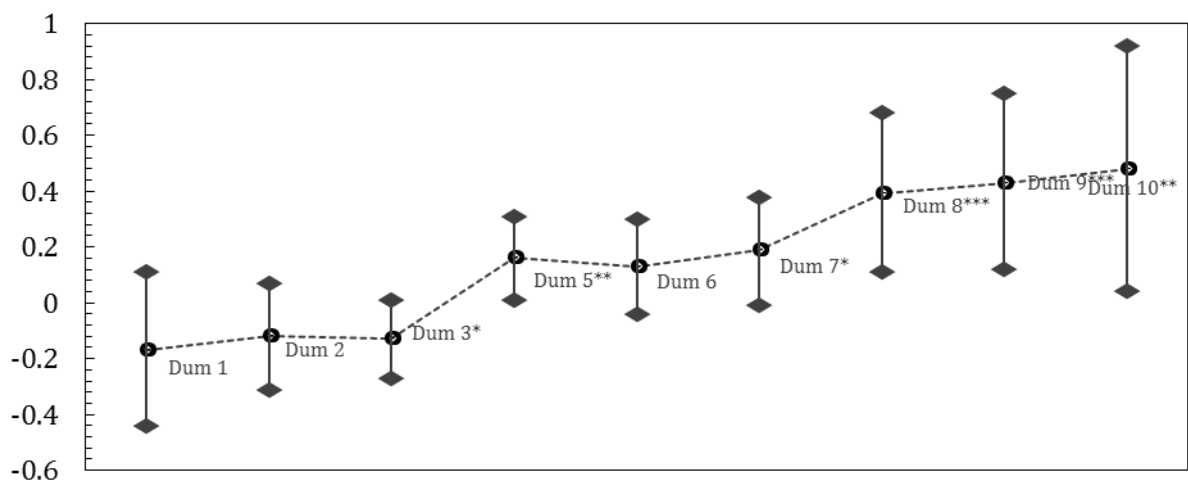
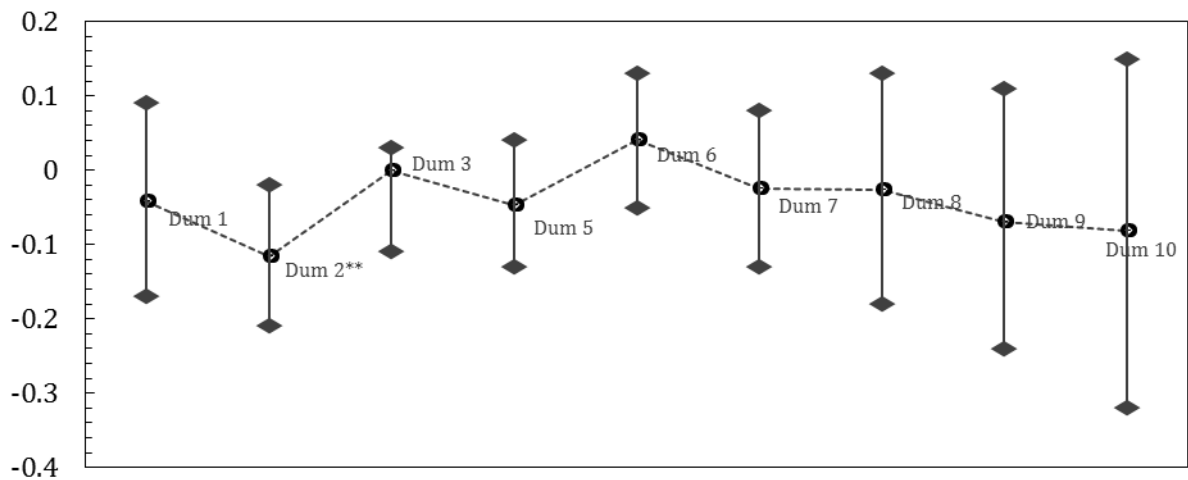


Figure 3. Estimated coefficients and confidence intervals wage group dummies (Dum) in association with Q₁ (up), Q₂ (middle) and Q₃ (down).

* Significant at 10% significance level ($0.1 > p \geq 0.05$)

** Significant at 5% significance level ($0.05 > p \geq 0.01$).

*** Significant at 1% significance level ($p \leq 0.01$).

With the wage dummies included, the models' goodness of fit is 2.1, 4.1 and 1.8 percent, respectively, which is rather low. However, this is not unusual for such regression analyses, where a major part of the variance is caused by the heterogeneity of the respondents' answering behaviour. If the wage dummies are excluded, the goodness of fit is even lower at 1.2, 0.3 and 1.1 percent, respectively. Hence, *wage* seems to cause a large proportion of the variance of the dependent variables. For this reason, the wage dummies are included in subsequent regression analyses.

4.2. Nonlinear associations between age and the attitude towards retirement benefits

To test for nonlinear associations between age and the importance of retirement benefits for respondents, the entire sample was divided into five age groups. The differences between the age groups were examined using Model 2. The difference between this model and Model 1 is that *age* has been replaced by the age groups' dummies. As mentioned in the Methodology section, the five age groups are 18–30, 31–40, 41–50, 51–60 and 61–70 years, with 41–50 years as the base category. The results of these regression analyses with Q_1 , Q_2 and Q_3 as dependent variables are summarised in Table 10.

In association with Q_1 , only the negative coefficient of the age group dummy for the 18–30-year age group was significant ($P = 0.00$). Hence, compared to the base category, employees in this age group scored 0.116 (11.6 percentage points) lower on the 1-point scale that indicates whether the retirement plan was an important reason for them to join their current employer. Accordingly, people who are in the age group of 18 to 30 years are less likely to specify the retirement plan as an important reason to join their current employer, compared to respondents between 41 and 50 years old.

The only significant coefficient of an age dummy in association with Q_2 was for the age group of 31 to 40 years ($P = 0.05$). This coefficient was negative, which implies that people within this category are less satisfied with their pension plan, with 0.139 points on a 5-point scale (2.8 percentage points), compared to those in the base category. Therefore, on average, employees who are between 31 and 40 years old are associated with a lower retirement-plan satisfaction than employees between 41 and 50 years old.

With respect to the association between the age group dummies and Q_3 , the results reveal that only the coefficient of the oldest age group (61–70 years old) is statistically significant ($P = 0.03$). Furthermore, the difference between this age group and the base category (41–50 years old) is 0.22 on the 5-point scale indicating how important an employee considers the availability of a retirement plan to be for spending an allowance on. This can be interpreted to mean that for an employee in the oldest age group, Q_3 is 0.22 points higher on a 5-point scale than it is for employees between 41 and 50 years old, which is 4.4 percentage points. In other words, for an employee between 61 and 70 years old, it is more important to have a retirement plan available on which to spend any additional allowance than it is for an employee of the base category.

Table 10: Regression output Model 2 (Hypotheses 1, 2 and 3).

Variable	Q ₁ (Retirement plan)	Q ₂ (Retirement plan)	Q ₃ (Retirement plan)
Age 18-30	-0.116*** (0.044)	-0.049 (0.085)	-0.096 (0.091)
Age 31-40	-0.013 (0.037)	-0.139** (0.071)	-0.059 (0.077)
Age 51-60	0.024 (0.036)	-0.040 (0.067)	0.071 (0.073)
Age 61-70	0.035 (0.050)	-0.064 (0.095)	0.224** (0.103)
Gender	0.017 (0.027)	0.064 (0.053)	-0.031 (0.058)
Children	-0.014 (0.016)	-0.022 (0.031)	-0.021 (0.033)
Wage dummies	Yes	Yes	Yes
R ²	0.022	0.045	0.022

Notes: N = 1006

Data Source: Global Benefits Attitudes Survey 2015-2016 by Willis Towers Watson.

* Significant at 10% significance level ($0.1 > p \geq 0.05$)

** Significant at 5% significance level ($0.05 > p \geq 0.01$).

*** Significant at 1% significance level ($p \leq 0.01$).

A plot of the estimated coefficients of age group dummies and the confidence intervals is displayed in Figure 4. These figures clearly demonstrate the linearity of the associations between the age group dummies and the dependent variables Q_1 and Q_3 . Because of the

linearity of these age group dummies, I used the linear term of *age* for subsequent regression analyses.

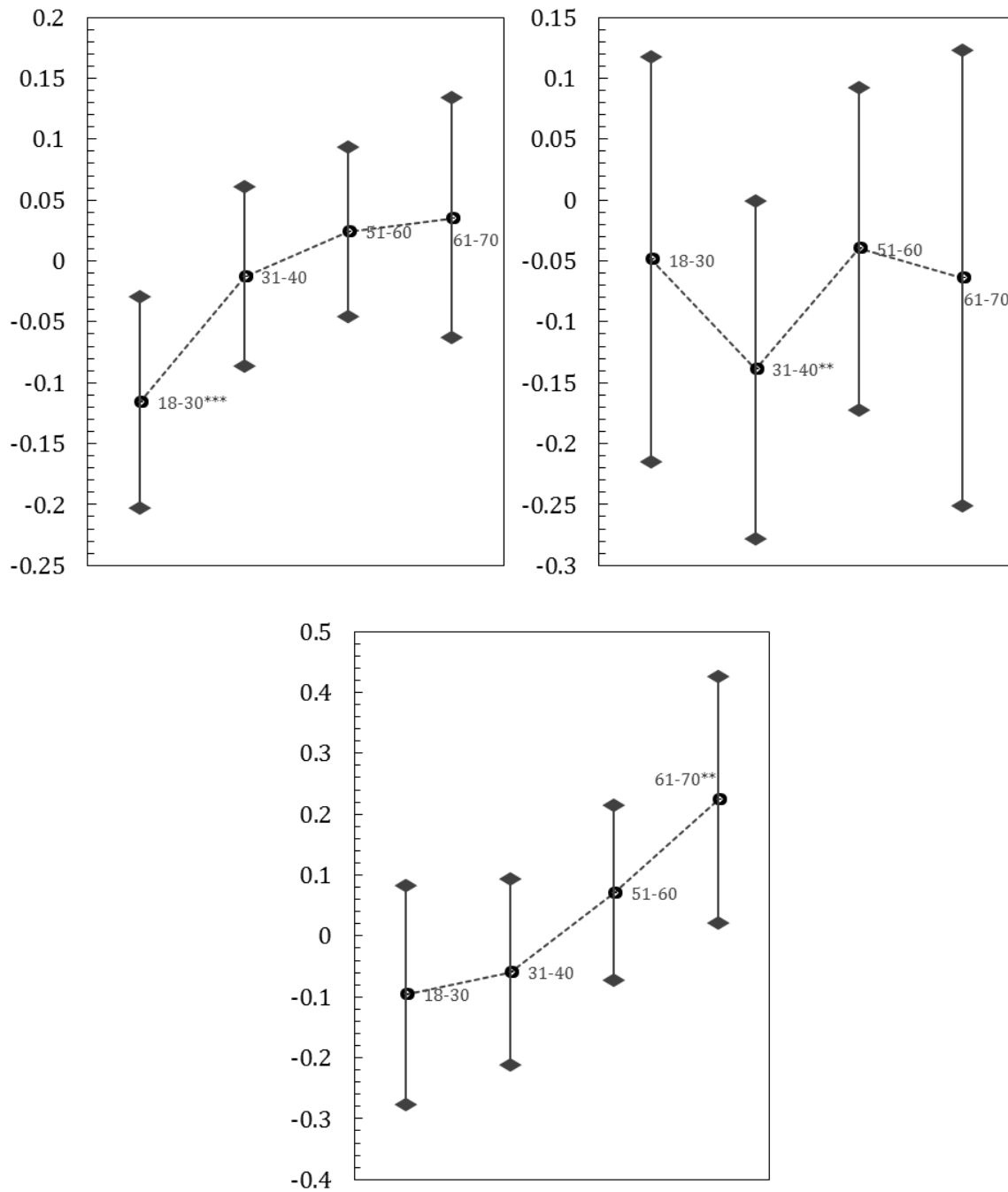


Figure 4. Estimated coefficients and confidence intervals age group dummies in association with Q₁ (up, left), Q₂ (up, right) and Q₃ (down).

* Significant at 10% significance level ($0.1 > p \geq 0.05$)

** Significant at 5% significance level ($0.05 > p \geq 0.01$).

*** Significant at 1% significance level ($p \leq 0.01$).

4.3. Associations between age and retirement feature preferences and age

The differences in preferences for features of the retirement plan between employees of different ages were examined (Hypothesis 4) using Model 1. The results are presented in Table 11. The cases and preferences referred to in the following section are provided in Table 5.

For the first two cases, both coefficients are negative (-0.03 and -0.02) and statistically significant ($P = 0.00$). Therefore, an employee who is one year older, on average, is more likely to prefer option A to B in the first two cases. Specifically, if *age* increases by 1, the difference is 0.027 points (0.4 percentage points) and 0.017 points (0.2 percentage points) on the 7-point scale that indicates the preference of the respondents. The difference is directed towards option A. This implies that older employees are more likely to prefer receiving a regular guaranteed payment every month of their lives (Case 1), with no chance of increasing or decreasing returns (Case 2). The models' goodness of fit is 5.6 and 5.0 percent, respectively.

In contrast, the coefficient of *age* is positively associated with the third, fourth and fifth cases and is statistically significant ($P = 0.00, 0.00, 0.07$). If *age* increases by 1, the preference variables increase by 0.014, 0.017 and 0.009 points, respectively, on the 7-point scale that indicates the preference of the respondents. This is 0.20, 0.24 and 0.13 percentage points higher, respectively. The difference is directed towards option B, implying that, on average, an employee who is one year older is more likely to prefer option B to A. This indicates that in Case 3, older employees prefer to share the risk of their retirement plan with others rather than making their own decisions. In Case 4, older employees prefer a retirement plan that decides how their retirement fund should be invested. Furthermore, in Case 5, older employees prefer a more generous pension at retirement, without access to their savings before they retire. The models' goodness of fit is 5.4, 3.3 and 2.0 percent, respectively.

Moreover, with respect to the control variables, the negative coefficient (-0.206) of *gender* is also significant ($P = 0.075$) in association with Case 3. Compared to male respondents, the score of female respondents is 0.206 points (2.9 percentage points) lower on average on the 7-point scale. Therefore, a male employee is more likely to prefer option A – that is, make his own decisions and face the risks of managing his retirement savings.

Furthermore, the coefficient of *children* associated with Case 5 is also significant ($P = 0.071$). The value of -0.122 implies that with each extra child in an employee's household, the score on the 7-point scale that indicates the preference for the options in Case 5 is 0.122 points (1.7 percent) lower. Therefore, for each extra child under the age of 18 who lives in the employee's household, the employee is more likely to prefer Option A – that is, have access to pension savings before retirement in order to spend on health or housing needs and receive a less generous pension at retirement.

Table 11: Linear regression output Model 1 (Hypothesis 4)

Variable	Case 1 (A/B)	Case 2 (A/B)	Case 3 (A/B)	Case 4 (A/B)	Case 5 (A/B)
Age	-0.027*** (0.004)	-0.017*** (0.004)	0.014*** (0.004)	0.017*** (0.005)	0.009** (0.005)
Gender	-0.088 (0.110)	-0.065 (0.095)	-0.206** (0.103)	-0.069 (0.116)	0.036 (0.125)
Children	0.043 (0.059)	0.077 (0.0562)	-0.022 (0.055)	0.017 (0.063)	-0.122* (0.068)
Wage dummies	Yes	Yes	Yes	Yes	Yes
R ²	0.056	0.050	0.054	0.033	0.020

Notes: N= 1006.

Data Source: Global Benefits Attitudes Survey 2015-2016 by Willis Towers Watson.

* Significant at 10% significance level ($0.1 > p \geq 0.05$)

** Significant at 5% significance level ($0.05 > p \geq 0.01$).

*** Significant at 1% significance level ($p \leq 0.01$).

4.4. Associations between financial literacy and the attitude towards retirement benefits

Finally, Model 3 was used to examine the association between employees' financial literacy and their attitude towards retirement benefits (Hypothesis 5). Separate regression analyses for both indicators of financial literacy were conducted.

According to the results (see Table 12), a positive association exists between an employee's level of financial literacy and the dependent variable Q_3 . The coefficients of the association between the financial literacy indicators (0.116 and 0.135) and Q_3 are statistically significant ($P = 0.00$). This result can be interpreted to mean that an increase in an employee's financial literacy score by 1 point for each indicator increases the score of Q_3 by 0.116 and 0.135 points, respectively, on a 5-point scale. Therefore, employees

who carefully consider the affordability of their purchases and pay their bills on time are more likely to find it important to be able to spend any additional allowance on their retirement plan. In contrast, none of the financial literacy indicators were significantly associated with Q_1 and Q_2 .

This result implies that an association exists between financial literacy and the attitude towards retirement benefits. However, the financial literacy indicators are not significantly correlated with Q_1 and Q_2 ; therefore, Hypothesis 5 cannot be confirmed with certainty. Furthermore, the change in the coefficients of *age* after adding the financial literacy variables is minimal in terms of size and significance. The goodness of fit of Model 3 is between 2.1 and 4.2 percent.

Table 12: Linear regression output Model 3 (Hypothesis 5)

Variable	Q ₁ (Retirement plan)		Q ₂ (Retirement plan)		Q ₃ (Retirement plan)	
Indicator	(1)	(2)	(1)	(2)	(1)	(2)
Financial	0.010	0.12	0.013	0.034	0.116***	0.135***
Literacy	(0.016)	(0.017)	(0.031)	(0.033)	(0.034)	(0.036)
Age	0.004***	0.004***	0.002	0.002	0.006**	0.006***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Gender	0.016	0.015	0.072	0.069	-0.029	-0.039
	(0.028)	(0.028)	(0.053)	(0.053)	(0.057)	(0.057)
Children	-0.007	-0.005	-0.019	-0.015	-0.029	-0.015
	(0.015)	(0.015)	(0.029)	(0.030)	(0.031)	(0.031)
Wage	Yes	Yes	Yes	Yes	Yes	Yes
Dummies						
R ²	0.021	0.021	0.041	0.042	0.030	0.032

Notes: N= 1006.

Indicator 1: *Before I buy something I carefully consider whether I can afford it.*

Indicator 2: *I always pay my bills on time.*

Data Source: Global Benefits Attitudes Survey 2015-2016 by Willis Towers Watson.

* Significant at 10% significance level ($0.1 > p \geq 0.05$)

** Significant at 5% significance level ($0.05 > p \geq 0.01$).

*** Significant at 1% significance level ($p \leq 0.01$).

5. Discussion and Conclusion

This thesis investigates the differences in attitude towards retirement benefits and differences in preferences for certain features of the retirement plan among employees of different ages. A review of previous studies on this topic in the Netherlands was presented and an empirical analysis was conducted. The results of the empirical analysis and the limitations of the study are discussed in this section, followed by the conclusion.

5.1. Correlations between the attitude towards retirement benefits and age

First of all, older employees perceived retirement benefits offered, more frequently than younger employees did, to be an important factor in signing a contract with their current employer. On average, only 21 percent of the respondents selected retirement benefits to be an important reason for joining their current employer.

Second, when employees are offered an allowance to spend on a variety of benefits, older employees find the opportunity to spend the allowance on their retirement plan more important than younger employees do. Accordingly, older people would choose to spend their allowance on retirement benefits more often than younger employees would. Overall, the possibility to spend the allowance on the retirement plan was perceived most important out of six options: Retirement plan, medical protection, life and disability insurance, financial protection and insurance, employee discounts and wellness programs.

5.2. Correlations between preferences for retirement plan features and age

The preferences for retirement features differ for older and younger employees. Generally, employees tend to be more risk-averse concerning their retirement benefits when approaching their retirement age. The findings present five significant differences in preferences.

First, older employees prefer to have a regular monthly payment that is life lasting at the moment of retirement, than a fund of money that could eventually run out. This fund of money could be invested, left to children or accessed when desired.

Second, compared to younger employees, older employees are more likely to prefer a guaranteed amount at retirement without a chance of lower or higher returns. This is preferred instead of a higher pension in most years during retirement with the risk of being worse off when financial markets decline.

Third, older employees prefer not to make their own decisions concerning their retirement plan. They rather share the financial risks with others in their retirement plan. Whereas younger employees prefer to make their own decisions and face the risks of managing their own retirement savings.

Fourth, regarding the investment decisions of the retirement savings, older employees rather let their retirement plan select investment options. In contrast to that, younger employees prefer to make investment decisions themselves.

Last, older employees are less inclined to want access to their pension savings before the moment of retirement. They prefer to have a more generous pension at retirement, whereas younger employees prefer to have access to their savings before the moment they retire.

5.3. Correlations between the attitude towards retirement benefits and financial literacy

According to this study, employees associated with a higher financial literacy are more likely to spend an additional allowance on retirement benefits. Recall that the financial literacy of an employee is defined as the extent to which he or she pays bills on time and considers the affordability of purchases. Nevertheless, financial literacy was not significantly related to the fact that the retirement plan was an important reason to join the current employer or retirement plan satisfaction. According to this result, employees who are conscious of their personal finances have a slightly different attitude towards retirement benefits, but not in all cases.

5.4. Limitations and Recommendations

Originally, I planned to examine the association between age and the importance of retirement benefits for employees. However, one of the limitations of this study is that with the items that are available in the survey, it is not possible to measure this association. This problem could be solved by adding a question to the survey that asks the respondents how important retirement benefits currently are to them.

Moreover, I have purposefully limited my study to the differences in attitude towards retirement benefits within the Netherlands, however, the full sample of the GBAS worldwide could be used for the analysis as well. When the full sample is available, an improvement could be made by analysing the differences between the Netherlands and other countries. However, due to limited access to the data set, it was not possible to analyse these differences for this study. For this reason, I recommend to use a worldwide sample for future research on the differences in attitude towards retirement benefits among different countries.

Furthermore, in this study, I was not able to distinguish between generation and age effects due to the cross-sectional data that is used for the empirical analysis. Accordingly, a comparison between generations was not possible. For future research, a panel or repeated cross-sectional data set is recommended. With this type of data, it can be examined whether the gap with respect to the attitude towards retirement benefits is generational.

Another limitation is that the data set does not include the respondents' level of education. For this reason, controlling for the level of education was not possible, whilst previous studies showed that the attitude towards retirement benefits is positively associated with a higher level of education (Van Raaij, Huiskes, Verhue, & Visser, 2011). For future research, an improvement could be made by including the respondents' level of education into the data set.

5.5. Conclusion

In summary, this thesis showed that the attitude towards retirement benefits does vary for employees of different ages. Moreover, older employees also have different preferences for retirement plan features than younger employees have.

Based on the findings, I would recommend companies to adjust their retirement plan on specific employee categories. If working conditions are adjusted to the lifestyle of an employee, working for a certain company can become more attractive and companies can hire highly motivated employees. This is in line with the trend of personalized benefits (Weerts - van Delft & Vermeulen, 2016).

In general, younger employees are interested in other job aspects compared to older employees, not solely concerning retirement benefits. This thesis only investigates the relationship between the attitude towards retirement benefits and age. To optimize the development of personalized benefits, future research is required to test the relationship between the age of an employee and the importance of or attitude towards, other working conditions.

Bibliography

- Aegon. (2013, June 7). *Pensioen speelt maar nauwelijks bij jongeren*. Retrieved from [www.aegon.nl: https://www.aegon.nl/blog/pensioen-speelt-maar-nauwelijks-bij-jongeren](https://www.aegon.nl/blog/pensioen-speelt-maar-nauwelijks-bij-jongeren)
- AFM. (2012). *Een volgende stap naar meer pensioeninzicht: pensioeninformatie actief gebruiken*. Amsterdam: Autoriteit Financiële Markten.
- AFM. (2015). *Neem drempels weg opdat Nederlanders in actie komen voor hun pensioen*. Amsterdam: Autoriteit Financiële Markten.
- Ameriks, J., & Zeldes, S. (2004, September). How do household portfolio shares vary with age? Columbia University.
- CBS. (n.d.). *Arbeidvolume naar bedrijfstak en geslacht; nationale rekeningen*. Retrieved from Centraal Bureau voor de Statistiek: <https://opendata.cbs.nl/statline/#/CBS/nl/dataset/82579NED/table?dl=8467>
- Central Council for Financial Services Information. (2016). *Financial Literacy Survey: 2016 Results*. Japan: Central Council for Financial Services Information.
- Ekerdt, D., Hackney, J., Kosloski, K., & DeViney, S. (2001). Eddies in the stream: the prevalence of uncertain plans for retirement. *Journal of Gerontology*, 162-170.
- Giesler, M., & Veresiu, E. (2014, October 1). Creating the Responsible Consumer: Moralistic Governance Regimes and Consumer Subjectivity. *Journal of Consumer Research*, pp. 840-857.
- Helman, R., VanDerhei, J., & Copeland, C. (2007). *The Retirement System in Transition: The 2007 Retirement Confidence Survey*. Washington D.C.: Employee Benefit Research Institute.
- Hira, T., Rock, W., & Loibl, C. (2009). Determinants of retirement planning behaviour and differences by age. *International Journal of Consumer Studies*, 293-301.
- International Network on Financial Education (INFE). (2011). *OECD INFE Measuring Financial Literacy: Core Questionnaire in Measuring Financial Literacy: Questionnaire and Guidance Notes for conducting an Internationally Comparable Survey of Financial literacy*. Paris: OECD.

- Munnell, A., Dushi, I., Sanzenbacher, G., & Webb, A. (2015, August). Do Households Increase their Savings when the Kids Leave Home. Boston, USA: Netspar Academic Series.
- Perkins, K. (2008, October 23). Social Insecurity: Retirement Planning for Women. *Journal of Women and Aging*, pp. 37-53.
- Prast, H., & van Soest, A. (2016, May). Financial Literacy and Preparation for Retirement. *Intereconomics*, pp. 113-118.
- Van Eekelen, L., Van Rossum, A., Smits, A., & Wit, M. (2015, June). Tijd voor Pensioenbewustzijn. Utrecht, Netherlands: Netspar Academic Series.
- Van Raaij, F., Huiskes, N., Verhue, D., & Visser, J. (2011). *Individual Differences in Pension Knowledge*. Tilbur/Amsterdam: Wijzer in Geldzaken/Pensioenkijs.nl.
- Van Soest, A. (2016, February). Wat vinden en Verwachten Nederlanders van het Pensioen? Tilburg, Netherlands: Netspar Industry Series.
- Visser, J., Oosterveld, P., & Kloosterboer, M. (2012). *Pensioencommunicatie: behoeften en barrières. Geïntegreerd rapport van onderzoek onder deelnemers en gepensioneerden*. . Amsterdam: TNS NIPO.
- Weerts - van Delft, M., & Vermeulen, C. (2016, May). Personal Benefits, het arbeidsvoorwaardenpakket van de toekomst. *Pensioen & Praktijk*, pp. 20-23.
- Wijzer in geldzaken. (2009). *Nieuw meetinstrument: 'De pensioenbewustzijn-meter'*. Den Haag: www.wijzeringeldzaken.nl.
- Wijzer in geldzaken. (2014). *Pensioenmonitor 2014: Een onderzoek naar kennis en gedrag rondom de oudedagsvoorziening onder de Nederlands beroepsbevolking*. Den Haag: Wijzer in geldzaken.