Pension conditions, job satisfaction and labor turnover – The role of the employer contribution in funding pensions

D R A F T

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Abstract

We construct a unique data-set to explore the variation across Dutch second-pillar defined benefit pension funds to analyze the role of the employer contribution share in pension funding and benefit generosity, and to ascertain the level of participant pension knowledge, satisfaction with employment conditions and pension package, and labor turnover intentions. The data set consists of a combination of data from a representative sample of 66 Dutch pension funds covering around 91% of contributions paid and almost 90% of their plan participants, with data from a large survey among Dutch citizens regarding their evaluation of employment conditions and preferences, including pensions.

The paper has a threefold aim. We analyze first how the employer contribution relates to pension benefit generosity and funding of pension plans, next how a better understanding and knowledge by employees of the features of their pension plan, including the employer contribution, potentially contributes to more satisfaction with their employment and pension conditions, and finally how pension satisfaction and pension knowledge impacts on job turnover intentions.

We identify the employer contribution as a strong indicator of the generosity of pension plans and the financial position of pension funds. Furthermore, a higher employer contribution and more detailed knowledge about one own's pension plans are key factors for higher pension satisfaction and lower job turnover intentions.

Keywords: pensions, premium, employer contribution, pension knowledge, job turnover, human resources.

1 Introduction

The Netherlands has a well-developed employment-based funded pension system with traditionally a strong commitment by employers. The current average employer share in annual pension contributions at Dutch pension funds is around two thirds. This represents a substantial addition to the gross wage, of around 13%. Pensions are widely seen in the literature as an integral component of human resource management policies that aim to influence job satisfaction, embeddedness, and turnover intentions (Gorina & Hoang, 2020, Munnell et al. 2017, Hauknecht 2017). However not much is known how effective pensions are as a human resource tool.

This paper is exploring in combining two different types of data sets. The first data set consists of key characteristics of the 66 largest Dutch pension funds, such as the funding policy and plan generosity. This set covers 90% of the pension contributions and 85% of the workers with an employment-based pension plan. The second data set contains the perceptions of almost 7,000 Dutch citizens regarding their employment conditions, of which pensions are included.

The combined data set allows us to test three hypotheses within the context of Dutch pension funds. First, we postulate that a higher employer contribution share will go together with higher benefit generosity, higher contributions, and a better financial position of the pension fund. Secondly, we state that a higher employer contribution signals a greater commitment of the employers in providing an attractive remuneration package. Subsequently, a higher employment share will be associated with lower turnover intentions and greater satisfaction with employment conditions in general and pension package in particular. Thirdly, the more employees know about their pension fund, and the more correct this knowledge is, the more employees are satisfied with their employment conditions and the lower their turnover intentions will be. Our findings in general confirm these expectations.

This paper contributes to the literature in providing empirical evidence in disentangling the strong role of the employer share as a predictor for the attractiveness of employment-based pension plans for employees. Furthermore, this paper adds by clarifying that a more correct understanding of the details of pension plan leads to higher job satisfaction and lower turnover intentions. Both topics are largely unexplored in the literature as far as we know. There are a limited number of studies on the specific role of the size of employer share in pension contribution (e.g. Gorina & Hoang 2020, Quinby & Sanzenbacher 2020). We also have only a small number of recent papers stressing that specific knowledge of details around pension plan rules is more important than financial literacy in explaining individual decision-making and behavior regarding pensions (Bucher-Koenen et al. 2019, Elinder et al., 2020, Debets et al. 2020).

Unknown makes unloved. The results of this paper imply a simple but important message for employers. Be more explicit and visible in your commitment with your workforce pensions to get a more fair and better appreciation for your involvement.

The topic of this paper is timely as the Dutch pension system is on the eve of a structural reform. Since the 1950s, the dominant plan type offered by Dutch pension funds is based on defined benefit features. This type of plan will be replaced nation-wide, in short time (2026), by a plan type based on defined contribution (DC) principles. The details of the new DC plan in the Netherlands are still being discussed. What will remain for certain is that the employer continues to take part in paying pension contributions. Therefore, employers can still utilize the employer contribution component to signal

their commitment and care with the pensions of their workforce. In this way, companies can also employ DC pension plans in their human resource management. Our data set also contains respondents with a DC pension plan. This allows us also to check the impact of these types of pension schemes on satisfaction and turnover.

The structure of the paper is as follows. We start in section 2 with a discussion of the literature to further motivate our research questions. Then we assess in section 3 the economic attractiveness of pension plans by looking at objective core characteristics of pension funds, among them the share of the employer in the contributions, the generosity of the plan, the financial position, and the riskiness of the pension fund. We evaluate 66 Dutch DB pension funds, covering 91% of total pension contributions and 87% of all plan members of pension funds. In section 4, we investigate the perceived attractiveness of employment conditions and pension conditions as measured in an extensive survey among Dutch citizens (Augustus & Ponds, 2020). With this information, we are able to improve our understanding of participants' pension knowledge and satisfaction regarding their employment conditions and pension plan, of which both are key determinants in labor turnover incentives.

2 Literature

Standard economic theory suggests a pension plan in operation should be neutral in regard to labor compensation and the impact on job mobility (Sharpe 1976). However, the literature indicates that the structure of the pension plan is often used as a human resource management tool to influence workers embeddedness and turnover intentions (Hauknecht 2017).

Two approaches can be discerned in understanding the role of employment-based pensions for the remuneration of offered labor (Rauh et al. 2020, Ippolito 2002, Gustman et al. 1994).
The first approach, known as the *legal contract framework*, relates total remuneration for workers to their marginal product of labor. The compensation will be paid as gross wages plus additional payments, including contributions to the pension plan in operation. The contribution payments can be split up between employer and the employees. When the employer only pays a part of the pension premiums, then this will not affect total compensation but will lead to either a higher gross wage or lower pension entitlements. The impact on turnover would then be neutral.
The second approach is known as the *implicit contract framework*. In this approach, total compensation to the working force, including pensions, need not necessarily be equal to its marginal product as pensions are used by employers to incentivize workers. Pensions in this approach are an integral component of the human resource management policies to affect job satisfaction and turnover intentions (Lazear 1983, Gorina & Hoang 2020, Munnell et al. 2017, Hauknecht 2017, Haverstick et al. 2015). Pension conditions may be structured to reward long stayers or employees with preferred skills.

The legal contract approach may link compensation and productivity each period. The implicit contract framework ought to structure compensation to productivity as well, but then over a much longer period (Gustman et al. 1994).

Mitchell (1982) provided early evidence in the US of a negative correlation between pensions and job mobility. Typically, the accrual of pension benefits for a DB plan is related to the salary of the employee, years of service and retirement age via a specified formula. This plan type is appropriate in structuring

the outflow of the workforce by providing greater benefits to long-term employment or to workers with specific skills. Many studies have published detailed analysis for specific plans, explaining how specific features of pension plans are beneficial for preferred workers, particularly long stayers and jobs with specific skills. Allan and Clark (1987), Gustman et al. (1994), Gorina and Hoang (2020) provide overviews of these type of studies. For the Netherlands, Lammers et al. (2017) study a major reduction in generosity of the two pension funds in the public sector and the health sector that occurred in 2003. This reduction was attained through the step-over from a final-pay to an average-wage related pension structure. They find that the lower generosity coincided with an increase in propensity to change jobs.

From the extensive literature on pensions and human resource management (for an overview compare Hauknecht 2017, Gorina & Hoang, 2020, Quinby 2020), we observe that the attention paid to the role of employer contributions, in particular, is limited. Gorina & Hoang (2020) evaluate reforms in US public sector plans to restore sustainability and they find strong evidence that increases in employer contributions reduce turnover. Workers perceive employer contributions as a sign of employer commitment to pension funding and organizational care. Quinby & Sanzenbacher (2020) evaluate job mobility between private and public sector jobs to analyze the impact of public sector pension reforms on the relative attractiveness of working in the private and public sector. They find that public sector employers with relatively generous pensions are better able to recruit high-wage workers from the private sector. However, this advantage is lost when workers are asked to contribute more from their own wages.

As the employer may use the pension package as part of HR management, the individual employee can only be affected as far as he recognizes and understands the pension plan details and the role of the employer. There is an extensive literature on financial literacy and the relationship with failures in individual decision making on pensions (Lusardi & Mitchell 2014). Many papers can also be found on trust and confidence in the pension system and how this relates to specific knowledge and understanding of pensions (van Dalen & Henkens 2018, Cruijsen et al. 2019).
In general, current research reports that a substantial part of pension fund participants are not aware of the details of their own pension plan (Lusardi and Mitchell 2014)[1]. A perspective that is less analyzed is to what degree the employees have knowledge and understanding of the details of their own plan and how this may affect their satisfaction and job search behavior. A few papers finds out that participants with more knowledge are more likely to make better decisions regarding retirement planning and related endeavors. Elinder et al. (2020) find in a Swedish survey that two thirds of the respondents have insufficient knowledge to understand how pension choice can affect their future pensions In addition to this, they find that those with more knowledge about the Swedish pension system are more likely to have planned for their retirement than those with less to no knowledge. Bucher-Koenen et al. (2019) finds for a set of seven European countries, the planned effect of pension reforms on labor supply decision is driven by individuals with a good knowledge of these reforms. The findings in our paper confirm the importance of specific pension knowledge as we identify that more

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[1] Some examples. For Sweden, Elinder et al. (2020) report that two thirds of survey respondents indicate that they have insufficient knowledge to understand how pension choices affect their pension. For the U.S., half of plan participants do no know whether their plan is defined benefit or defined contribution (Gustman, Steinmeier, & Tabatabai,2010; Pew Charitable Trusts, 2017). For the Netherlands, Augustus & Ponds (2020) report that almost 60% of plan members of Dutch pension funds have no idea about the contribution rate and employer contribution share of their own pension plan.

correctly informed individuals are more satisfied with their employment and pension conditions and are less inclined to change jobs.,

This paper contributes to the literature by exposing both the role of the employer component in pension funding and the role of pension knowledge for satisfaction with employment and pension conditions and for job mobility in the context of Dutch pension funds.

3 Funding and benefit generosity of Dutch pension funds

3.1 Construction dataset

A data set was constructed by data collection from pension fund websites in combination with public data available from the pension fund supervisor DNB (2019). In total, we were able to compile a complete data set for 66 pension funds consisting of fund characteristics important to our research. This set includes 28 industry funds and 38 corporate funds. As reported in Table 1, these 66 funds cover a large part of the total contributions collected by the total 219 registered pension funds (91%). Many of the participants are also affiliated to these 66 funds, covering 87% of the actives, 81% of the deferred and 92% of the retirees. The pension funds for professionals, like dentists, notaries, are not included in this research as the associated members themselves pay the contribution in full.

Variable	Level	Mean	St.D	Min	Max	% of Total
Contributions	€	444,662	1,408,618	26,722	9,939,874	0.91
Members	Active	76,372	212,030	1,728	1,237,600	0.87
	Deferred	125,408	253,636	103	1,095,600	0.81
	Beneficiaries	46,959	127,077	94	886,529	0.92
Pension funds	N	Selected 66				219

Note: % of Total represents the fraction of the 66 selected pension funds in the total of all 219 pension funds registered with DNB end of 2018.

Table 1: Pension fund selection representation

Table 2 provides a description of the 66 pension funds data we used in our analysis. We have three blocks in Table 2. Blocks 1 and 2 present information based on the data collected from the available pension fund resources such as websites and public documents. Block 3 contains data from DNB.

Block 1 provides information from the 66 funds about variables that are important for the accrual of pension entitlements. **Block 1a**. informs on the yearly pension accrual which is defined by the product of the accrual rate and the pensionable wage. The mean of the accrual rate is 1.71% with a maximum of 2% and a minimum of 0.8%. The pensionable wage is defined by one's annual wage minus a floor which takes into account the flat rate state pension that is commonly around €14,000 a year. All plans have a maximum salary up to which a pension can be accrued in the scheme. This maximum is restricted for fiscal reasons at €110,111. **Block 1b** also presents information on the growth of the individual pension pot each year. The pension pot is the wealth that matches with the present value of the promised pension benefits to the individual. Next to the annual accrual, the pension pot increases over time with indexation. An indicator of future indexation is the real funding ratio. This is

assets over the value of full indexed accrual. The higher the real funding ratio, the greater is the potential indexation. That is why the growth of the pension pot has been weighted by the real funding ratio.

Statistic	N	Mean	St. Dev.	Min	Max
1a. Pension accrual promise					
Accrual rate	66	0.017	0.002	0.008	0.020
Pensionable wage	65	74,225	28,938	17,033	110,111
Maximum salary	65	88,310	29,172	31,200	110,111
AOW floor	66	14,086	2,251	0	20,938
1b. Pension fund pot *PP*					
Accrual of pension pot	66	7,754	1,012	4,333	9,451
- as a % of salary	66	0.155	0.020	0.087	0.189
Accrual weighted with indexation potential	66	6,994	1,175	3,973	10,131
- as a % of salary	66	0.140	0.023	0.079	0.203
2. Pension contribution					
Premium	66	0.259	0.061	0.090	0.492
Employer premium share *ecs*	66	0.670	0.140	0.50	1.000
Employer contribution as % salary 50.000	66	0.127	0.049	0.045	0.331
- weighted with indexation potential	66	0.118	0.055	0.041	0.362
3. Funding ratios					
Policy funding ratio 2019	66	1.049	0.084	0.913	1.310
Real funding ratio 2018	66	0.901	0.080	0.770	1.160
Premium funding ratio 2018	66	0.937	0.176	0.629	1.600

Table 2: Descriptive statistics pension fund data set

Block 2 is related to funding. First the premium rate is displayed. Its mean is 25.9%, but the spread is large with 49.2% as maximum and 6.1% as minimum. The part of the premium burden paid by the employer, i.e. the employer share, varies from 50% as minimum and 100% as maximum. A key variable in the paper is the employer contribution, which is the product of premium rate and employer share. **Figure 1** displays the employer contribution for all 66 pension funds, ordered from high to low. As reported in the table, the employer contribution turns out at a mean of 12.7% for a worker with a fulltime annual wage of € 50,000, but the minimum is 4.9% and the maximum 33,1%.

Finally**, block 3** provides an overview of the relevant funding ratios. The policy funding ratio is defined as the 12-months average of the actual funding ratio, which is assets over liabilities on the balance

sheet. The policy funding ratio is at year-end 2019 and is composed of the information available at the funds themselves. The real funding ratio and premium funding ratio positions for year-end 2018 and is derived from DNB data. The real funding ratio is defined as assets over fully indexed liabilities. This variable is an indicator for the indexation potential in the future. The premium funding ratio is the annual contribution sum divided by the value of the annual pension accrual. Many pension funds have a premium funding ratio below 100%. This indicates that the accrual is not matched in full by the contribution and therefore that part of the accrual is subsidized by the fund's assets.
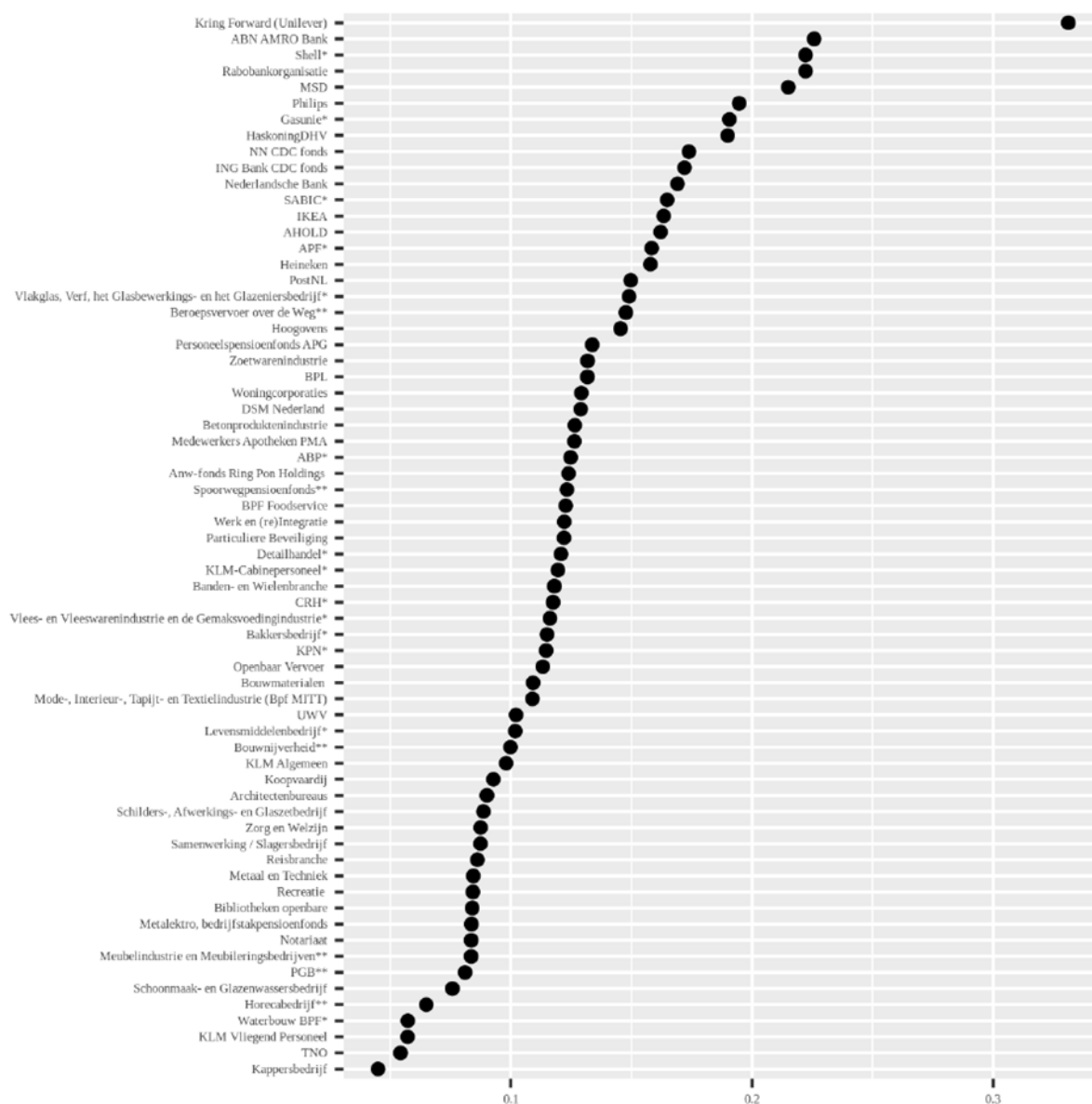

Figure 1: Variation of the employer contribution across 66 pension funds, calculated for a standard individual as % of a full-time salary of €50,000

Now that we have encountered the pension parameters considered in this research, it is worthwhile to examine how these vary across pension funds. We first look in **Figure 2** at the distribution of four important variables, namely, the employer contribution share, contribution rate, accrual rate and the (AOW) floor. The employer contribution share and contribution distribution display a lot of variation. These variables greatly influence how the valuation of the pensions and pension pots differs across pension funds. The accrual rate is skewed to the left and peaks at a value of 1.875%. This is the standard accrual rate set by most pension funds. The (AOW) floor also peaks at the value of 14,167 euros, which is the standard value set by most pension funds for 2020.

Figure 2: Distribution over 66 pension funds of selected variables: contribution rate, the employer share, the accrual rate and the (AOW) floor

3.2 Analysis

We report a number of regressions relating the importance of the employer for funding and benefit generosity.

Table 3 informs on funding. Column (1) indicates a strong, significant relationship between the employer share and the premium rate. Column (2) controls for the type of pension funds with a dummy for industry funds and for the composition of group of plan members with the relative share of actives in total members. The latter is significant and positive. We are primarily interested in the role of the

employer contribution specifically, of which is the product of the employer share and the premium rate. Comparing Column (4) to Column (3) clarifies that it is the employer contribution that relates significantly to the policy funding ratio rather than the premium or contribution share. It is possible to note that industry pension funds have a downward impact on premium rate and the funding ratio. We therefore observe that the employer contribution adds to a better funding position of Dutch pension funds, whereby the company pension funds in general fare better than the industry funds.

Table 3: Funding

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====================================================================================================
                                             Dependent variable:
                      ------------------------------------------------------------------------------
                              Premium                          Policy funding ratio
                         (1)              (2)               (3)                 (4)
----------------------------------------------------------------------------------------------------
Employer share        0.214***         0.177***           0.047
                      (0.047)          (0.053)           (0.086)

Premium                                                   0.296
                                                         (0.188)

Employer contribution                                                        0.393**
                                                                            (0.157)

Industry pension funds                 -0.015            -0.058**            -0.049**
                                      (0.016)           (0.024)             (0.022)

Share actives                          0.123**           -0.024              -0.015
                                      (0.052)           (0.080)             (0.074)

Constant              0.116***         0.111**            0.981***            1.012***
                      (0.032)          (0.048)           (0.074)             (0.045)
----------------------------------------------------------------------------------------------------
Observations            66               66                66                  66
R2                     0.247            0.342             0.267               0.290
Adjusted R2            0.235            0.311             0.219               0.256
Residual Std. Error  0.053 (df = 64)   0.050 (df = 62)   0.074 (df = 61)     0.073 (df = 62)
F Statistic          21.000*** (df = 1; 64) 10.762*** (df = 3; 62) 5.568*** (df = 4; 61) 8.449*** (df = 3; 62)
====================================================================================================
Note:                                                   *p<0.1; **p<0.05; ***p<0.01
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Table 4 relates the role of the employer contribution to variables representing pension generosity. Column (1) finds a significant relation with the ranking of pension plans according to the pension agency rating bureau TPRA, whereby the ranking is based on quality of the plan (TPRA 2020). The ranking is also positively related to the size of the maximum pensionable wage. Column (2) establishes a positive, significant association of the employer share with the accrual percentage. Column (3) indicates that industry pension funds in general have a much lower pensionable wage, but funds with relatively more active members have a higher maximum pensionable wage.

Columns (4) to (6) relates employer contribution with the annual growth of the pension pot for three wage classes, 30k, 50k and 90k. The pension pot integrates the accrual rate and the maximum pensionable salary, so the significant relation with the employer contribution is re-established for all three wage classes. For the low wage class of 30k the maximum pensionable wage is not restrictive, but higher wage classes may meet and/or surpass the maximum salary up to which accrual is permitted. Therefore, the coefficient for the maximum pensionable salary is increasing in the level of the wage class. We also observe that the coefficient for the employer contribution is increasing with the wage level, so individuals with a higher salary are better off in funds with higher employer contribution.

Table 4: Pension generosity

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====================================================================================================
                                             Dependent variable:
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	tpra_rank (1)	opb (2)	Max pensionable wage (3)	dPP30k (4)	dPP50k (5)	dPP90k (6)
Employer contribution	3.685** (1.839)	0.020*** (0.005)	-0.322 (0.510)	0.076* (0.040)	0.128** (0.050)	0.182*** (0.053)
Industry pension funds	-0.038 (0.244)	0.00003 (0.001)	-0.193*** (0.064)	-0.002 (0.005)	0.007 (0.007)	0.006 (0.007)
Share actives	0.030 (0.790)	-0.002 (0.002)	0.614*** (0.212)	-0.020 (0.017)	-0.025 (0.022)	-0.029 (0.024)
Max pensionable wage	1.523*** (0.480)	0.0004 (0.001)		0.001 (0.010)	0.036*** (0.013)	0.183*** (0.013)
Constant	1.493** (0.574)	0.014*** (0.002)	0.643*** (0.140)	0.107*** (0.013)	0.109*** (0.016)	0.003 (0.017)
Observations	64	65	65	65	65	65
R2	0.326	0.272	0.307	0.116	0.210	0.821
Adjusted R2	0.281	0.223	0.273	0.057	0.158	0.809
Residual Std. Error	0.706 (df = 59)	0.002 (df = 60)	0.202 (df = 61)	0.016 (df = 60)	0.020 (df = 60)	0.021 (df = 60)
F Statistic	7.143*** (df = 4; 59)	5.597*** (df = 4; 60)	9.000*** (df = 3; 61)	1.963 (df = 4; 60)	3.992*** (df = 4; 60)	68.686*** (df = 4;60)

Note: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

3.3 Final

We have therefore found that the employer contribution is a strong indicator for the level of accrual and contribution rate, the pension fund financial health and the pension pot value required to meet the obligations towards the plan participants. Industry pension funds were found to have a significantly lower premium rate as well as lower funding ratios. Funds with a higher share of active members in their participant population are found to have a significant higher premium rate as well as a higher pensionable wage.

4 Construction data sets of DB and DC respondents

The questions we address in this section are first how much the employees are aware of the employer contribution, how that may affect the level of satisfaction with their pension conditions, and how their pension knowledge and satisfaction may impact on their turnover intentions. We address these questions by employing data from a large survey under Dutch citizens regarding their perception and experiences with employment conditions. The survey is a joint effort of APG and DPG and is published as 'Nationaal Arbeidsvoorwaarden Onderzoek 2020' (Augustus & Ponds, 2020).

A selection of the variables has been used from the cited survey, in particular the ones relevant for evaluating the perception by respondents of pension conditions. Section A1 from the appendix provides more details on the survey questions:
- Pension fund:
  In the survey there was the option to choose one of the pension funds listed (18 of the largest pension funds were available) or, in an open text box, provide the name of their pension fund. Respondents could also reply `I do not know' or 'no answer'.
- Participant characteristics:
  Various variables regarding background variables, among them education, income, and age.
- Job turnover:
  Respondents were asked whether they would like a new job, and if yes, whether they were actively or not actively searching for one.
- Pension premium rate:
  Respondents were asked what they think the premium rate for their pension is.

- Employer contribution share:
  As with the contribution rate, respondents were asked what they think the share of the premium is that their employer pays for their pension.
- Satisfaction level(s)
  Respondents were asked how satisfied they were with their current employment conditions and with their pension conditions. The possible responses range from very unsatisfied, unsatisfied, neutral, satisfied, to very satisfied. Respondents also could opt for no answer, and I do not know.

The survey contains data on 7,028 employees in the Netherlands, 4,463 of them indicated they accrue a pension through their employer.

One main research question in our paper is whether individuals with a better understanding of the details of the pension plan differ from less informed individuals regarding satisfaction with their employment and pension conditions, and with their turnover intentions. In the survey we have two questions asking respondents what the contribution rate is of their pension plan and what the employer share is in the contribution rate. **Figure 3** below displays for the 4,463 respondents with a pension plan from their employer the distribution in their answers on both questions.

The first major finding is that most people were not able to answer the questions on contribution rate level and employer share of their pension fund. 58.3% did not know the contribution rate, 54,2% not the employer share.
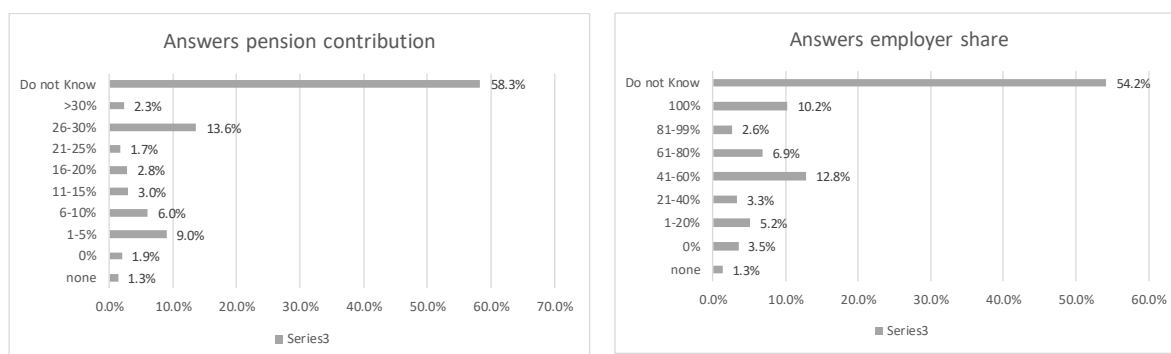

Figure 3: Pension knowledge as reported by respondents

To investigate the extent employees are aware of the details of their pension plans, their answers in the survey were compared with the actual figures collected from the pension fund websites. The pension fund data (n=66) and the survey datasets were merged. This meant that only the pension funds present in the self-constructed dataset could be analyzed with the survey data. Initially we had 4,463 respondents with a pension plan from their employer. 665 of them were not useful as they did not name the pension fund they belong to or they were a participant in a pension fund not covered by our list of 66 pension funds. 341 respondents indicated they were participating in a DC plan and 3445 respondents are participant in one of the selected 66 pension funds. In total, 51 DB pension funds out of 66 are present in the survey data.

The table below reports relevant statistics of the survey respondents that participate via their employer in a DB plan (data set DB) or in a DC plan (data set DC). Two additional sets were constructed, one consisting of DB plan participants and the other one with DC plan participants, containing those

participants which have answered both the questions about the contribution rate and the employer share. These additional sets are denoted as data set DB* and data set DC*.

The majority of the 3,455 DB plan participants have a high education level (66%), around half have an income between 2,000 and 4,000 euros (51%), and the largest age group represented is between 41 and 55 years old (41%). A large fraction of the respondents, namely 68.6%, are satisfied with their employment conditions. B However, the satisfaction with pension condition is much lower at a level of only 36.4%. Only 36.6% of the respondents gave an answer what the premium rate of their plan is, and 40.4% answered the question about the employer share. In total 711 respondents gave on both questions an answer. The characteristics of this group is listed in the second column, denoted as data-set DB*. This sub-group has a small bias of being higher educated, having a higher income and being older. They are substantially more satisfied with their employment conditions than the full DB plan (73.9% versus 68.8%), but foremost they experience a much higher satisfaction with their pension conditions (52.7% for the DB* set versus 36.4 in the DB set). DB* participants also have a slightly higher preference of staying in the job, and subsequently a smaller willingness to change jobs.

Table 5: Descriptive statistics data sets DB, DB*, DC and DC*

DATA-SET		DB	DB*	DC	DC*
Variable	Level	prop.	prop.	prop.	prop.
Education	Low	0.09	0.06	0.07	0.07
	Medium	0.25	0.22	0.22	0.16
	High	0.66	0.73	0.72	0.77
Income	<2,000	0.13	0.08	0.09	0.09
	2,000-4,000	0.51	0.40	0.42	0.36
	4,000-6,000	0.24	0.34	0.29	0.35
	>6,000	0.12	0.18	0.19	0.20
Age	18-30	0.13	0.07	0.11	0.15
	31-40	0.25	0.20	0.24	0.27
	41-55	0.41	0.44	0.45	0.41
	56 and above	0.21	0.29	0.22	0.23
Turnover	New job active	0.219	0.199	0.216	0.199
	New job passive	0.445	0.448	0.457	0.492
	No new job	0.336	0.352	0.327	0.309
Satisfaction	Employment conditions	0.688	0.739	0.672	0.665
	Pension conditions	0.364	0.527	0.369	0.351
Answer	Contribution rate	0.366	1.00	0.642	1.00
	Employer share	0.404	1.00	0.695	1.00
N		3455	711	341	191

Data-set DB comprises the 3,455 respondents participating in a DB plan offered by one of the selected 66 pension funds. Data-set DC are respondents with a DC plan. The sets DB* and DC* consist of respondents from respectively the DB and the DC sets which gave an answer to the questions regarding the contribution rate and employer share of their pension plan.

The 341 DC plan participants have the same age distribution as the DB plan participants, but have a larger proportion of higher education and a higher income respondents. DC plan holders are comparably more satisfied with their employer and pension conditions compared to respondents with

a DB plan. DC plan participants also stand out with a substantial higher response rate on the questions regarding contribution rate and employer share than DB plan holders, 64.2% versus 36.6% respectively 69.5% versus 40.4%. A reasonable explanation for these considerable differences might be that the primary communication of DB plan is about the pension income projection, whereas the DC plan communication is related to the yearly premium rate and the allocation of the premium burden over employer and the individual participant. The DC* plan holders distinguish as having on average the highest education and the highest income, but also the lowest willingness to stay in the job. They show up to be slightly less satisfied with their employment and pension conditions compared to the DC plan holders in general. As different with the observation for the DB* plan participants where pension knowledge relates with higher satisfaction levels for pension conditions compared to DB plan holders, the shown pension knowledge by DC* plan holders does not correspond with higher satisfaction levels regarding their pension conditions compared to the DC plan holders in general.

5 DB plan participants

This section tests if and to what extent the degree of satisfaction and turnover intentions of DB plan holders relates to pension knowledge and employer contribution.

5.1 Pension knowledge

For the group respondents in set DB* we can compare their answers with the actual contribution rate and the actual employer share of their own pension fund. As reported in **Table 6**, the average of the estimated value of the contribution rate is far below the average of the actual levels. The average of the estimated employer share is quite close to the actual value but the varies to a large extent as measured by the standard deviation.

Table 6: Estimations and actual values of contribution rate and employer share

```
===============================================================
                 Estimation         Actual values

               Average St.dev       Average St.dev
_____

Premium rate     0.125   0.61         0.241   0.03

Employer share   0.609   0.32         0.632   0.11


===============================================================
```

As we are interested in the impact of pension knowledge on satisfaction and turnover intentions, we construct two categorical variables that measure the degree of correctness of the answers regarding premium rate and employer share. When asked about the pension contribution rate, respondents had, aside from the option to answer 'I don't know', the choice between 8 buckets, each of them with a specific part of the range of possible contribution rates. the buckets ran from 0%, 1-5%, 6-10%, 11-15%, 16-20%, 21-25%, 26-30%, and finally larger than 30%.We base our measure of correctness on the number of buckets that the given answer deviates from the correct one. The measure is defined by taking the absolute value of this difference and divide the result by 7. So, when the answer is fully correct, the deviation is zero and therefore the measure of correctness is 1. In case the given answer is in one of the two corners and the correct answer in the other corner, then the deviation is maximal, and the degree of correctness is 0. We name this measure: premium_correct. The same procedure is applied to the employer share, starting with the bucket 0%, subsequently 1-20%, 21-40%, 41-60%, 61-80%, 80-99%, and finally 100%. We use the same procedure to derive the measure of correctness for the employer share. This measure is indicated as employershare_correct, and range from 1, fully

correct, to 0, fully incorrect. **Figure 4** presents the distribution of the respective correctness measures. We can observe that respondents answered more often closer to the correct value of the employer share compared to the premium rate.

Table 7 relates the correct measures to a list of control variables using an ordered logistic regression model. Unsurprisingly, given the reported results in **table 6** regarding the underestimation by respondents, the level of premium and employer contribution rate negatively correlates to the survey participants' pension fund knowledge. This result indicates that respondents participating in a pension fund with higher actual values for employer share and contribution rate are less likely to be in the higher categories of the pension knowledge (i.e. they are more incorrect).

Furthermore, Table 7 suggests that the level of pension knowledge is related to income level and type of pension fund. For those in an industry pension fund, the odds of being more correct about their pension premium rate is greater than those not in an industry pension fund. Respondents with a higher income have a greater chance of providing more correct answers about their pension premium and employer contribution share than those with a lower income. Also, higher educated respondents are significantly more likely to be closer to the correct values than low educated respondents. The other relationships remain the same.

Age has no effect on pension knowledge. This is the reason why only the binary variable *Age 56 and older* is included instead of each age category. This might be caused by the removal of respondents who replied `I do not know' or gave no answer to pension related questions. Women are more likely than men to have better premium knowledge.
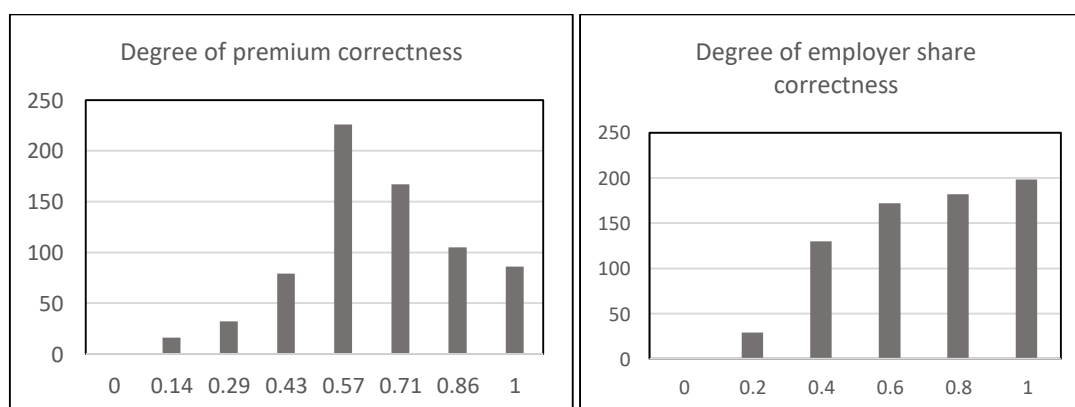

Figure 4: Correctness of pension knowledge

Table 7: Pension fund knowledge

```
================================================================================
                              Dependent variable:
              ------------------------------------------------------------------
              Premium_correct Employershare_correct Premium_correct Employershare_correct
                  (1)              (2)                 (3)              (4)
--------------------------------------------------------------------------------
Premium       -16.384***
              (2.923)

Employer share                     -1.390**
                                   (0.708)

Employer contribution                                -10.444***        -3.351*
                                                     (2.102)          (1.950)

Education high    0.433***        0.311*              0.342**          0.323**
                 (0.163)         (0.160)             (0.161)          (0.160)

Wage income 2000_4000  0.282      0.105               0.258            0.102
                      (0.175)    (0.175)             (0.174)          (0.175)

Wage income 4000_6000  0.394**    0.358**             0.381**          0.355**
                      (0.178)    (0.179)             (0.178)          (0.179)

Industry pension funds 1.355***  -0.195               1.478***         -0.303
                      (0.334)    (0.237)             (0.339)          (0.282)

Age 56_and_above   0.0005         0.010              -0.011            0.014
                  (0.150)        (0.153)             (0.151)          (0.153)

Gender female      0.315**       -0.188               0.285**         -0.187
                  (0.145)        (0.145)             (0.144)          (0.145)

--------------------------------------------------------------------------------
Observations        711           711                 711              711
================================================================================
Note:                                           *p<0.1; **p<0.05; ***p<0.01
```

5.2 Satisfaction with employment conditions and pension conditions

The two diagrams in **figure 5** show the answers provided by the 3,455 DB plan respondents on the questions regarding what their degree of satisfaction is with the employment conditions delivered by their employer and with the pension conditions. More than 67% of the respondents are (very) satisfied with the employment conditions, but only 37% with their pension conditions. It is noticeable that 18% of the respondents gave no answer on the pension satisfaction question, whereas this group is of negligible size for the question on employment condition satisfaction.
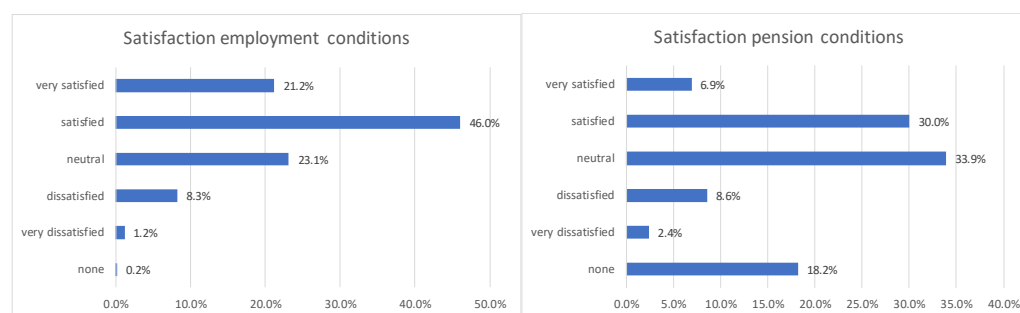

Figure 5: Satisfaction with employment conditions and pension conditions

Table 9 relates pension knowledge of the respondents with their satisfaction regarding their employment and pension conditions for all 3,455 respondents accruing a DB pension plan with their employer. Employment satisfaction and pension satisfaction are both represented by a binary variable equal to 1 when the respondents are (very) satisfied, and 0 otherwise. The table also presents binary variables that represent those that provided answers about their pension knowledge. The variables are equal to 1 when the respondents had given an answer on the questions about the level of contribution rate and the employer share for their pension fund, and 0 when responding 'I do not

know' or no answer. Using the logistic regression model, we find a strong significant relationship between the pension knowledge variables and pension satisfaction, also when including control variables. Overall, providing an answer to the contribution rate and employer share questions accompanies a higher pension satisfaction, 20%-pt resp. 31%-pt. No relationship was found between satisfaction of employment conditions and pension knowledge. When comparing the impact of control variables on satisfaction, it is noteworthy how older workers appear to be positive about their pension conditions but negative about employment conditions. This is probably due to them getting better informed on pensions as they near retirement. Furthermore, we note that those with higher incomes are significantly associated with a higher satisfaction regarding their employment and pension conditions than lower incomes.

Table 9: Satisfaction in DB dataset

	Dependent variable			
	Satisfied with conditions relating to			
	Employment (1)	Pensions (2)	Employment (3)	Pensions (4)
Premium answer	0.090* (0.054)	0.216*** (0.052)	0.061 (0.055)	0.199*** (0.053)
Employershare answer	0.020 (0.053)	0.364*** (0.051)	-0.046 (0.055)	0.307*** (0.053)
income4000_6000			0.379*** (0.063)	0.229*** (0.059)
incomeless_than_2000			-0.326*** (0.070)	-0.258*** (0.075)
incomemore_than_6000			0.435*** (0.082)	0.199*** (0.075)
Education low			-0.091 (0.086)	-0.087 (0.088)
Education middle			-0.119** (0.057)	-0.062 (0.058)
Gender female			0.009 (0.050)	0.046 (0.048)
Age 31_40			-0.064 (0.078)	-0.020 (0.078)
Age 41_55			-0.137* (0.075)	0.062 (0.075)
Age 56 and older			-0.220*** (0.083)	0.300*** (0.082)
Constant	0.449*** (0.030)	-0.583*** (0.031)	0.555*** (0.077)	-0.690*** (0.077)
Observations	3,455	3,455	3,455	3,455
Log Likelihood	-2,142.890	-2,201.576	-2,069.566	-2,163.615
Akaike Inf. Crit.	4,291.781	4,409.152	4,163.133	4,351.229
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 10 provides a more detailed analysis of the impact of pension knowledge on satisfaction of respondents with their employment conditions. We apply the ordered logistic regression method with the satisfaction variable as the dependent variable running from (very) unsatisfied to neutral to (very) satisfied. We restrict the analysis to the sub-group of 711 respondents from data set DB*. The two binary variables for pension knowledge responses in Table 9 have been replaced by the two categorical variables measuring the correctness of pension fund knowledge, respectively premium_correct and employershare_correct. We also add the employer contribution in the regression.

Remember that the correctness measures run from 0, indicating a fully incorrect answer, to 1, a fully correct answer. So, the higher the coefficients for the correctness measures of the answers, the more satisfied respondents are with their plan. The coefficients for the pension knowledge variables are

each positive and significant separately. Taken jointly, column (6), only the correctness measure for employer share remains (strongly) significant.

We also find a strong, significant relationship between the employer contribution and pension satisfaction. A reasonable explanation may be that a higher employer contribution is seen by employees as a sign of employer commitment to pension funding and is therefore valued positively, contributing to higher satisfaction with their pension terms (Gorina & Hoang, 2020).

Hence, more knowledge and a higher employer contribution both correspond with a higher pension satisfaction. The employer contribution has no impact on satisfaction with the employment conditions. We also note that the correctness measure for employer share has a positive impact as well.

Table 10: Satisfaction in DB* dataset

```
===========================================================================
                                   Dependent variable:
                        ---------------------------------------------------

                              Ordered satisfaction relating to
                        Employment conditions         Pension conditions
                        -------------------------   -----------------------

                          (1)       (2)       (3)       (4)       (5)       (6)
-------------------------------------------------------------------------------

Employer contribution   1.176     1.515     1.117    4.938*** 4.366*** 5.010***
                        (1.644)   (1.553)   (1.644)  (1.689)  (1.620)  (1.691)

Premium_correct         -0.032              -0.277    0.703*            0.489
                        (0.368)             (0.377)  (0.369)           (0.377)

Employershare_correct             1.085***  1.142***          1.154*** 1.062***
                                  (0.364)   (0.372)           (0.357)  (0.364)

Education low           0.226     0.273     0.280    -0.577*  -0.518   -0.537
                        (0.333)   (0.334)   (0.334)  (0.329)  (0.328)  (0.329)

Education middle        -0.123    -0.104    -0.106   -0.325*  -0.317*  -0.317*
                        (0.191)   (0.192)   (0.192)  (0.189)  (0.189)  (0.189)

income4000_6000         0.625***  0.590***  0.597*** 0.168    0.130    0.122
                        (0.182)   (0.182)   (0.183)  (0.177)  (0.178)  (0.178)

incomeless_than_2000    -0.324    -0.230    -0.247   -0.087   -0.070   -0.031
                        (0.289)   (0.288)   (0.290)  (0.267)  (0.266)  (0.268)

incomemore_than_6000    0.976***  0.949***  0.953*** 0.314    0.277    0.271
                        (0.230)   (0.231)   (0.231)  (0.227)  (0.227)  (0.228)

Gender female           0.087     0.089     0.100    -0.001   0.021    0.002
                        (0.161)   (0.161)   (0.161)  (0.158)  (0.158)  (0.158)

Age 31_40               -0.988*** -1.034*** -1.045*** -0.596* -0.672** -0.657**
                        (0.312)   (0.313)   (0.314)  (0.305)  (0.305)  (0.306)

Age 41_55               -1.111*** -1.116*** -1.131*** -0.499* -0.521*  -0.502*
                        (0.301)   (0.301)   (0.302)  (0.292)  (0.291)  (0.292)

Age 56 and older        -1.220*** -1.228*** -1.244*** -0.301  -0.350   -0.333
                        (0.315)   (0.316)   (0.316)  (0.307)  (0.306)  (0.307)

-------------------------------------------------------------------------------
Observations            711       711       711      711      711      711
===============================================================================
Note:                                            *p<0.1; **p<0.05; ***p<0.01
```

5.3 Job turnover intentions

The survey also asked whether or not the respondents are looking for a new job. **Table 11** relates the answers for this question to several variables, including satisfaction with the employment conditions package, satisfaction with the pension plan and the employer contribution. The satisfaction factors are presented as binary variables equal to 1 when the participants are satisfied or very satisfied with either employment or pension packages and 0 for those who have indicated neutral or (very) dissatisfied. In the columns (1)-(4) we test for all 3,455 respondents from the DB set and in the columns (5)-(8) for the 711 respondents of the DB* set that answered the questions regarding contribution level and employer share. Note the columns (1)-(2) and (5)-(6) report on the intention of respondents of looking

actively for a new job, whereas (3)-(4) and (7)-(8) account for the willingness to stay with their employer. Control variables are considered in the regressions, of which include income, education and distinction between industry funds and company pension funds.

One primary finding is that a higher employer contribution impacts negatively on the intention to find a new job, but positively on the willingness to stay. We note that the value of the estimated coefficients is substantially larger for the DB* set in columns (5) to (8) compared to the larger group in columns (1) to (4), indicating that the better informed have a lower intention for turnover.

The more satisfied individuals are with their employment and pension conditions, the lower their turnover intentions are. Satisfaction with employment conditions has a two to three times bigger impact on both the intention to find a new job and the intention to stay compared to the impact of satisfaction with the pension package. The pension package will be perceived by respondents as part of the full set of employment conditions, which may explain the smaller impact of pension satisfaction on labor turnover intentions compared to employment conditions. Regarding the impact of the pension knowledge variables we find no significant from the premium correctness variable, but the employer share correctness variable a strong significant and positive impact on the willingness to stay in the job.

Table 11: Job turnover intentions DB plan holders

| | Dependent variable: |
| | Active search new job | | No new job | | Active search new job | | No new job | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Employer contribution	-1.661*	-1.951**	1.412*	1.700**	-3.441**	-3.541**	2.504*	2.627*
	(0.857)	(0.842)	(0.800)	(0.782)	(1.732)	(1.707)	(1.497)	(1.480)
Satisfied employment	-0.620***		0.849***		-0.679***		0.707***	
	(0.052)		(0.055)		(0.124)		(0.127)	
Satisfied pensions		-0.188***		0.353***		-0.343***		0.348***
		(0.052)		(0.047)		(0.114)		(0.101)
Premium correct					0.339	0.381	-0.448	-0.498*
					(0.316)	(0.316)	(0.275)	(0.272)
Employer share correct					-0.199	-0.312	0.704***	0.754***
					(0.297)	(0.292)	(0.269)	(0.265)
incomeless_than_2000	0.258***	0.307***	-0.137*	-0.190**	0.430**	0.452**	-0.180	-0.199
	(0.075)	(0.074)	(0.077)	(0.074)	(0.207)	(0.205)	(0.212)	(0.208)
income4000_6000	-0.120*	-0.180***	0.113*	0.162***	-0.185	-0.272*	0.107	0.184
	(0.068)	(0.067)	(0.061)	(0.060)	(0.153)	(0.150)	(0.128)	(0.126)
incomemore_than_6000	0.116	0.036	0.098	0.171**	0.464***	0.368**	-0.102	-0.016
	(0.083)	(0.082)	(0.078)	(0.076)	(0.176)	(0.171)	(0.162)	(0.160)
Gender females	0.142***	0.130**	0.097**	0.095**	0.123	0.123	0.203*	0.182
	(0.053)	(0.052)	(0.049)	(0.048)	(0.128)	(0.126)	(0.114)	(0.112)
Education low	-0.208**	-0.184*	0.316***	0.291***	-0.398	-0.444	0.333	0.357
	(0.096)	(0.095)	(0.089)	(0.086)	(0.278)	(0.276)	(0.230)	(0.227)
Education middle	-0.120*	-0.102*	0.082	0.054	-0.027	-0.031	-0.078	-0.079
	(0.063)	(0.062)	(0.059)	(0.058)	(0.155)	(0.152)	(0.138)	(0.137)
Age 31_40	0.130	0.128	-0.157**	-0.171**	-0.158	-0.114	-0.115	-0.145
	(0.086)	(0.084)	(0.079)	(0.078)	(0.267)	(0.263)	(0.215)	(0.214)
Age 41_55	0.184**	0.208**	-0.137*	-0.185**	0.246	0.304	-0.143	-0.204
	(0.083)	(0.081)	(0.076)	(0.074)	(0.249)	(0.245)	(0.206)	(0.204)
Age 56 and older	0.114	0.179**	0.278***	0.147*	0.041	0.152	0.260	0.139
	(0.092)	(0.091)	(0.084)	(0.082)	(0.261)	(0.256)	(0.214)	(0.211)
Industry pension funds	-0.110	-0.172*	0.270***	0.318***	-0.043	-0.136	0.446*	0.533**
	(0.098)	(0.096)	(0.092)	(0.090)	(0.261)	(0.257)	(0.227)	(0.224)
Constant	-0.202	-0.446**	-1.577***	-1.125***	-0.091	-0.253	-2.036***	-1.746***
	(0.227)	(0.222)	(0.214)	(0.206)	(0.583)	(0.578)	(0.520)	(0.506)
Observations	3,455	3,455	3,455	3,455	711	711	711	711
Log Likelihood	-1,710.145	-1,775.924	-2,029.371	-2,128.285	-317.410	-327.805	-428.095	-438.389
Akaike Inf. Crit.	3,446.290	3,577.847	4,084.741	4,282.570	664.819	685.610	886.190	906.777
Note:						*p<0.1; **p<0.05; ***p<0.01

5.4 Final

The main results regarding pension knowledge show that more than half of the survey respondents did not know the two principal characteristics of their pension fund: the contribution rate and the share that the employer contributes to the pension fund. Out of those who did provide an estimation for their premium and employer contribution share, we find that women, high income employees as well as those belonging to an industry pension fund had more pension knowledge. In pension funds with a higher premium and employer contribution share, there is a higher chance of underestimation of the actual values, as well as a lower pension knowledge.

The main findings regarding satisfaction show that respondents with a lower level of pension knowledge are more likely to be on the lower end of the pension satisfaction scale (i.e. unsatisfied). With a higher employer contribution share, there is a higher probability for pension satisfaction.

The main insights in relation to job turnover show that satisfaction with employment and pension conditions both reduce the intention to find a new job, indicating that the intention to stay is stronger the more satisfied respondents are with their employment and pension conditions. The impact of the employment conditions is roughly twice as large as that of the pension conditions. Furthermore, we find that individuals in funds with a higher employer contribution have significantly lower intentions to find a new job.

6 DC plan holders

A pure DC plan primarily specifies the annual contribution to an individual pension pot, which is invested at the expense and risk of the employee. Goda, Jones and Manchester (2017) find evidence that DC plans foster job mobility compared to workers with a DB plan. This may be explained by two reasons. Firstly, DB plans may subsidize older workers and long-term occupations at the cost of young workers and switchers, consequently hindering mobility from firms and companies with a DB plan. Secondly, switch-prone individuals may self-select in jobs with a DC plans, so that they will not be restricted by tenure-related pension subsidies in typical DB plans when switching jobs.

We have the same kind of information for DC plan holders that participated in the survey as for DB plan holders. Unfortunately, we were not able to collect the figures about the actual premiums and the employer share for the DC plans. Therefore, the current data does not allow us to construct knowledge correctness measures for DC plan respondents.

The table below for the 341 DC plan holders presents their willingness to change their job or to stay with their employer as independent variables. Explanatory variables included in the analysis are respondents' satisfaction with employment and pension conditions and dummy variables indicating whether or not they provided an answer to the questions about the DC premium rate and the employer share respectively. We also include other control variables concerning age, education, and income.
A greater satisfaction with employment conditions implies a lower willingness to change from their current employment. Satisfaction with pension conditions was not found to significantly impact the desire for a new job, but pension satisfaction clearly contributes to the willingness to stay at the company. Respondents who found themselves capable of answering the question about the premium rate have a significant stronger willingness to stay. We have also tested whether the given answers

regarding the levels of contribution rate and employer share impacts on turnover intentions but found no significant effects.

In conclusion, these findings confirm the notion that a DC plan will have a neutral effect on the search for a new job However, those who are satisfied about their plan and indicate their respective premium rate will be more inclined to stay.

Table 12: Job turnover intentions DC plan holders

```
===========================================================================
                                 Dependent variable:
                    -------------------------------------------------------
                       Active search new job            No new job
                     (1)      (2)      (3)      (4)      (5)      (6)
---------------------------------------------------------------------------
Satisfied employment -0.633***                -0.608*** 0.999***          0.946***
                     (0.162)                  (0.165)  (0.185)           (0.187)

Satisfied pension             -0.261   -0.141                   0.425*** 0.287*
                              (0.173)  (0.179)                  (0.151)  (0.157)

Premium answer       -0.214   -0.161   -0.204   0.445**  0.362**  0.422**
                     (0.193)  (0.190)  (0.195)  (0.187)  (0.182)  (0.188)

Employer share answer 0.290    0.277    0.292   -0.273   -0.260   -0.263
                     (0.207)  (0.203)  (0.208)  (0.191)  (0.185)  (0.191)

Controls               V        V        V        v        v        v

Constant             -0.530*** -0.869*** -0.511*** -1.395*** -0.755*** -1.450***
                     (0.186)  (0.160)  (0.187)  (0.211)  (0.149)  (0.214)
---------------------------------------------------------------------------
Observations          341      341      341      341      341      341
Log Likelihood      -160.381 -166.816 -160.068 -187.190 -199.811 -185.533
Akaike Inf. Crit.    328.762  341.633  330.137  382.381  407.622  381.065
===========================================================================
Note:                                        *p<0.1; **p<0.05; ***p<0.01
```

7 Discussion

The empirical evidence on the role of employer share for job satisfaction and job turnover intentions is not extensively explored. This paper adds to the existing literature by providing evidence from a unique data set consisting of key characteristics of 66 pension funds covering 90% of the active workforce and survey data among Dutch workers regarding their perception of employment and pension conditions. In this sample, the employer share in contributions vary from a minimum of 4.5% to a maximum of 33.1% of a participant's salary (on the basis of a 50 year old employee with an income of €50,000).

Strong significant evidence is found for our first hypotheses that a higher employer share in funding is associated with higher benefit generosity, higher contributions, and a better financial position of the pension fund. The results also support our second hypothesis that a higher employer contribution is a signal of greater commitment of the employer in providing an attractive package of remunerations, leading significantly to more satisfaction regarding employment conditions in general and pension package in particular. We find strong significant effects of both satisfaction variables and employer contribution on lower job turnover intentions. We also find positive evidence regarding our third hypothesis. The more employees indicate that they know about their pension fund, and the more correct this knowledge is, the more employees are satisfied with their employment conditions and the lower their turnover intentions will be.

The results from our analysis appear to have a better match with the implicit contract approach than the legal approach. This may also be the result of the historical roots of pension funds in the Netherlands. The predecessors of today's industry pension funds, namely widows' and orphan's

pensions with roots in the 19th century, were fully financed by the associate members themselves. Employers with their own company pension fund were required to finance the pension contribution in full. Over time, this historical diversity has evolved into the current practice, whereby specific allocations of the contribution burden have been established for the employer and the employee per pension fund. The breakdown of this contribution burden over employer's share and employee's share has been stable over time, although adjustments are possible. In the Dutch context, pensions conditions are an integral component of regular wage negotiations, in particular in industries and sectors with industry pension funds. Bosch et al. (2020), using an extensive administrative data set covering individual employees at different pension funds in the Netherlands for the period 2006-2012, find in the Dutch context that adjustments in the premium burden are split between employers and employees in line with the statutory division. They find no trade-off between the costs of pensions and wages as expected in the legal approach, at least not in the short run. Hence, total compensation will typically deviate from labor productivity depending on the bargaining power of workers' representatives and the employer as well as the importance employers attach to pensions as HR tool.

The Dutch pension fund scheme is on the eve of a transformation from a predominately DB-based plan structure towards a system with DC-based plans. Compared to a DB-plan, a DC-plan offers less opportunities for to use pensions as tool for vesting and structuring a long-term relationship between companies and their workforce. One main instrument of HR management will remain after the reform, this is specifically the role of employer contribution as sign of the commitment and care of the employer to provide an adequate pension for its workforce. We have explored how DC plans may contribute to the attractiveness of an employer. There are no hidden subsidies to long-stayers or from young to the old. Therefore, one may expect the impact of DC plans to be more neutral on the incentive to change from occupation. A good DC plan could potentially contribute to employees willing to stay longer. We indeed find satisfaction with a DC pension plan supports longer stay, especially those DC plan holders who indicate they have knowledge about their contribution rate.

However, unknown makes unloved. The main finding in this paper is that more pension knowledge, and more correct knowledge , will contribute to greater job satisfaction and less job turnover intentions. A very large group of employees in the survey are unknown with key characteristics of their pension plan, including the employees participating in plans with generous employer contributions. Employers therefore potentially have much to gain by spending time and effort in explicating their involvement in pensions. A similar potential gain in appraisal can also be reaped by labor unions as a key partner involved in negotiations on employment conditions, including pensions.

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APPENDIX

A.1 Selection of survey questions from Nationaal Arbeidsvoorwaarden Onderzoek

This section outlines the questions asked to respondents of the survey relevant in the analysis.

Q2. Do you expect to look for a new paid job within the next two years?
Q13. How much is your gross monthly income or salary approximately?
Q32. Do you accrue pension through your work?
Q33. With which pension fund or insurer are you currently affiliated?
Q38. How satisfied or dissatisfied are you with the pension that you are building up through your current employer?
Q40. What is your age?
Q42. What is your highest completed education?

QX. What is the contribution rate of your pension? In other words, what percentage of your pensionable salary do you put in each month for your pension?
- o   0%
- o   1-5%
- o   6-10%
- o   11-15%
- o   16-20%
- o   21-25%
- o   26-30%
- o   More than 30%

QX. What share of the pension contribution is paid by your employer?
- o   I pay the total contribution myself
- o   1-20%
- o   21-40%
- o   41-60%
- o   61-80%
- o   21-25%
- o   81-99%
- o   The employer pays the entire contribution

Q38. How satisfied or dissatisfied are you with the pension that you are building up through your current employer?
- o   Extremely unsatisfied
- o   Unsatisfied
- o   Neutral
- o   Satisfied
- o   Extremely satisfied

Q38. How satisfied are you with your pension fund / Employment conditions?
- o   Extremely unsatisfied
- o   Unsatisfied
- o   Neutral
- o   Satisfied
- o   Extremely satisfied

QX: Intention to change jobs