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Abstract

Reforms in private pension plans across the world are opening up more options for pension participants to make choices to suit their preferences. Freedom of choice is however not a unidimensional concept as it is commonly perceived by policy makers. People can value both the freedom to choose as well as the freedom not to choose This observation can have far-reaching implications for pension policy design. By using a unique panel survey among Dutch employees we are able to offer a more refined typology of preferences with respect to the freedom to choose. For most pension contract issues - level of pension savings, investment choice, risk coverage - a minority (14-26 %) values individual freedom of choice, whereas most would like to let their pension fund make the decisions, or favor a mixed model – having choice but not necessarily use this freedom - or are simply indifferent with respect to how their pension contract is designed and financed. Employees who distrust their pension fund or who do not express solidarity with other pension fund participants are far more likely to prefer freedom of choice compared to those who have a high level of solidarity and high level of trust in their pension fund.

Keywords

Private pensions; Choice, Surveys, Freedom, Pension funds, Netherlands

Introduction

Reforms in private pension plans across the world are opening up more options for pension participants to make choices to suit their preferences. In that respect policy makers are paying tribute to the principles of Milton Friedman who cherished the idea that people should be free to choose. Freedom of choice is often presented as the antidote to excessive government interference and an instrument which enables people to realize their goals and discipline agents and organizations (Friedman and Friedman 1980). The call for freedom is getting louder as individualization of everyday life is becoming more and more visible and trust in institutions is eroding. Numerous sociologists of name and fame (Putnam 2001, Beck 2002) have documented this trend and predicted its dire consequences. Policy makers have translated this trend into privatizing tasks and services which were financed or provided on a collective scale. Of course, the question remains: do people really want to take the fate of their lives in their own hands? The central research question which we pose in this paper is: to what extent do pension participants really want the freedom to choose when it comes to making decisions about their pension arrangements? It is often tacitly assumed that people desire freedom of choice, but is this true? In this paper, we present a refined typology of the choice preferences of employees saving for retirement for a number of pension domains.

For products and services with characteristics that can easily be evaluated before purchase freedom can be safely entrusted to individuals. But for complex services and products with long lasting consequences, such as pensions, freedom of choice may not be in the interest of citizens at all as they lack the financial knowledge to deal with financial issues, have misconceptions or cognitive biases (Bodie and Prast 2012, Chan and Stevens 2008, Lusardi and Mitchell 2014).[1] And in his description of the myths and truths of pension reforms the pension economist Barr (2002) argues that the freedom to choose is fraught with dangers. His evaluation on pension reforms focused on increasing choice is quite blunt: “the possibility that increased choice is welfare improving is a myth” (p. 13).

Still, despite these warnings governments have taken steps in this direction. For instance, the UK government is radically reforming the pension system by offering more choice to the owners of defined contribution pensions. They are allowed to take out their pension savings as a lump sum instead of buying annuities (see Treasury (2014)). The reason for undertaking this reform was stated explicitly in 2014 by the George Osborne, Chancellor of the Exchequer: “With more

choice and support for individuals and a regulatory structure designed to both protect consumers and promote competition, I am confident that the retirement income market will develop in a way that focuses on the interests of savers." Although this reform may offer more control for pension participants, the OECD (Financial Times, 7 December 2014) warned the UK government that the increased control of pensioners over their nest egg could be "detrimental to both retirement income adequacy and incentives to work", because of "myopic behaviour and insufficient financial literacy". Other countries are also on the move in making private pension plans more and more open to for individual choice. Information on the preferences of choice are badly needed in designing policies because incorporating choice involves not only economic problems but also ethical problems, as Sunstein (2015) makes clear. Activating choices can backfire and generate adverse selection (Handel 2013) and can be just as paternalistic when this is not in line with people's decision not to choose.

In short, the relevance of the question 'Do people want freedom of choice?' is gaining momentum as pension systems around the world are in the process of adapting to changes in population age structures (Holzmann 2013, Whiteford and Whitehouse 2006, Henkens et al. 2017) and structural changes in the labor market (Kahn 2012, Kahn 2010). In recent years, pension reforms have tended to move in the direction of individualized accounts and/or defined contribution contracts. As a result of these reforms, risks are transferred from the collective to the individual, increasing individual responsibility for adequate pension savings. In tandem with these reforms governments are sometimes led by polls which suggest that people desire choice options within pension arrangements without wondering whether these stated preferences truly reflect the freedom they want. In the Netherlands, for example, in 2014 the government initiated a poll among the general public about the future of pensions in which 60 per cent of the Dutch wanted to choose their own investment portfolio, 58 per cent wanted to choose the level of their own pension premium, and 45 per cent wanted to choose their own pension fund (Koenen 2014).

As we will show in the remainder of this paper, these figures need to be treated with care and caution because of the positive connotation of freedom. Asking individuals to value freedom to choose is bound to trigger associations that are undoubtedly positive as this fits well with the value of self-direction which most people cherish (see Davidov et al. (2008) for details). However, the scant evidence which exists on making active choices on investing pension savings suggests that exercising choice applies only to a small minority (Chetty et al. 2014, Rozinka and

Tapia 2007, Tapia and Yermo 2007, Byrne 2007, Agnew et al. 2003, Ameriks and Zeldes 2004). Therefore, it is of crucial importance to get a more refined insight in the degree of choice that employees desire in their pension arrangements.

In this paper, we provide an overview of the preferences concerning the freedom to choose in different aspects of collective pension contracts, based on a survey among 652 employees in the Netherlands. These employees participate on a mandatory basis in a pension fund, which provides them with a supplementary pension income on top of their public pension (see van Dalen et al. (2017) for a short overview). For most Dutch the public pension (first tier) and the supplementary pension (second tier) are the most important sources of pension income. The third tier of fully private pension arrangements has until now rarely been used by most workers because the first two tiers offer sufficient pension income.[2] However, the Dutch government is in the process of reforming the entire pension system and this includes the consideration of offering various choice options within the supplementary pension system and restricting pension insurance above a certain income level (100,000 euro; and government plans for lowering this threshold to 70,000 euro) implies that higher incomes will have to seek private pension insurance above this level. These measures will imply a radical switch because the Dutch system is traditionally based on the paternalistic model in which all key decisions are made by the so-called social partners – representatives of the unions and the employers. Individual choice is at present only available in the pay-out phase: the date of retirement and within limits the level of pension benefits can be varied over time (initially high, and later in life low or the reverse). Elements of choice in the so-called accumulation phase are non-existent, but these elements will certainly be considered in the future plans of the Dutch government as they believe this will increase trust in the pension system.

In this study we first measure the preferences for having freedom of individual choice as well as a preference for letting decisions be automatically carried out by their pension fund, or as Sunstein (2015) rephrases this as 'choosing not to choose'. We focus on four issues that are prominent in the debate on expanding individual choice in pension savings: (i) deciding how much will be saved for retirement, (ii) the choice of pension fund, (iii) the composition of the pension package, and (iv) the level of risk in investing pension savings. The results suggest that

quite a number of respondents value both the freedom to choose as well as letting decisions be made by their pension fund (and hence a preference for what we term 'delegated choice').

Second, based on the previous two preferences – 'free choice' and 'delegated choice' - we offer a more refined typology of choice preferences and we analyze the main determinants of these preferences. The results suggest that the desired freedom to choose is closely related to the expressed level of solidarity of participants and their trust in one's own pension fund. Or to rephrase this: pension participants with a desire to choose display lower levels of solidarity and trust than the other participants who are indifferent with respect to individual choice or who want to let decisions be taken by their pension fund.

Two types of freedom

Freedom of choice is generally seen as an aspect of life which is intimately related to one's well-being (Sen 1988). Without individual choice it would be hard to attain the goals people value in life and to improve individual well-being. Sen makes the distinction between the instrumental value of freedom on the one hand and the intrinsic value of freedom of choice on the other. The instrumental value – how a person can attain the best allocation of scarce resources in order to attain one's goal, optimal well-being – is familiar to economists and is perhaps in the back of the minds of policy makers when they propose to introduce 'free choice'. But freedom may also have an intrinsic value. Freedom may be valued in itself and one does not necessarily have to exercise the right of freedom to appreciate its value. A dual approach in the assessment of the concept of freedom is also visible in the work of Berlin who distinguished two types of liberty or freedom (Berlin 1958). Positive freedom on the one hand which he relates to the possession of the power and resources to fulfill one's own potential as opposed to negative liberty, which is the freedom from external restraint. Positive freedom captures the idea that individuals are their own master. Negative freedom is the absence of coercion. Our conjecture is that a similar dual appreciation of freedom may be applicable in matters of pension contracts. Positive freedom is assumed to exist among participants so they can fit their pension income to their life-course preferences. Coercion is part and parcel of collective insurance arrangements to prevent adverse selection. Solidarity among participants is needed to safeguard the promises made to each and in return freedom has to be restricted. In a manner of speaking, people have to put restrictions on their behavior, like in *The Social Contract* of Rousseau (1895), to attain a higher goal.

To get a clear picture of the preferences for freedom of choice in pension issues, it is important to acknowledge that because of freedom's dual nature it is possible and likely that many employees will value both the option of free choice as well the option to let pension decisions be decided upon by their pension fund. This may be the case because people see the need of a collective arrangement and the accompanying rules and restrictions. Or because most people follow the lead of default settings, but still feel the need to have the option of choice in case they want to depart from the choices made by a pension fund.

The preference for both types of freedom are expected to be (partially) determined by key elements that are tacitly assumed to be the foundation of a collectively organized pension system: solidarity and trust. We will subsequently discuss each of these two factors.

Solidarity in pensions

Solidarity is a key element in many public pension systems and most occupational pension systems which offer supplementary pension rights. As Tausch et al. (2013) argue solidarity can be organized at different levels. They make the distinction between risk solidarity, subsidizing solidarity and income solidarity. In all cases, it implies some form of redistribution of income. Risk solidarity becomes visible in the case where risk sharing "implies that *ex post* the lucky support the unlucky" (p. 298). Subsidizing solidarity involves *ex ante* transfers from one group to another, like in the case of longevity risk, where women are expected to live longer than men. Based on equal contributions this inequality will imply that women will benefit more than men from such a pension arrangement. Income solidarity is the explicit redistribution of income from rich to poor individuals or households, and the latter form of solidarity is especially visible in public pension arrangements. Within supplementary pension contracts solidarity generally refers the first two types of solidarity. In the Dutch occupational pension system, all individuals pay the same contribution rate to the pension fund, above the so-called franchise. Individual differences such as age, gender and income are not taken into account when determining the contribution rate. Securing solidarity in this contract comes at a price: to prevent adverse selection participants have to relinquish their freedom of choice as they are not free to switch pension providers unless they switch employer (Chen and Beetsma 2014). As such, fully supporting the idea of solidarity implies that one willingly delegates the choice to the pension fund. And hence our first hypothesis is formulated as follows:

Solidarity hypothesis: Pension participants with a low level of solidarity with other participants are more likely to desire the possibility of having individual choice in collective pension arrangements than participants who have a high level of solidarity.

Trust in pension funds

Trust is also a factor which can be distinguished at various levels. At the most basic level, anyone who saves for the future pension is putting trust in a system that will serve an insurance function by protecting property rights over time. The role trust plays in economic organizations and transactions is explained by Hyde et al. (2007) who state: "Trust reduces complexity, because it enables people to transfer responsibilities for activities that they themselves are not sufficiently competent to undertake." (p. 57) As societies and the institutions which make societies work become more complex, greater demands are made on trust (Taylor-Gooby 2005). This is especially pertinent in the case of pensions where choice overload is a prevalent characteristic and people either defer choices or opt not to choose at all. And, as Tversky and Shafir (1992) show, an important reason why people have difficulty in making decisions can be traced to the complexity of choices. The more freedom and the more options individuals face the more indecisive or stressed they may become. Choice overload is a real and present problem for consumers (Iyengar et al. 2004, Scheibehenne et al. 2010, Kuksov and Villas-Boas 2010, Schwartz 2000) and managing the overload is indeed a problem in many situations which citizens in their role as consumers or producers face.

A need for institutions which can simplify and provide trustworthy decisions or advice is often suggested by policy makers (see, e.g., the UK government's point of view, Treasury (2014)), but at the same time, there is also an extensive body of research by sociologists and political scientists who point to a secular decline of trust in social institutions. This is an important problem that troubles many policy makers and CEOs of organizations as they recognize the so-called paradox of trust: just when you need it most, it is the most difficult to get. As Putnam (2001) has showed in his influential work on social capital - trust is an essential ingredient and is being eroded by the more individualized lifestyles of modern society. These elements may also play out in the Dutch pension setting in which pension funds are also seen to

be facing a decline of trust (van Dalen and Henkens 2015). Hence, we formulate the following hypothesis:

Trust hypothesis: Pension participants who have a low level of trust in their pension fund are more likely to desire freedom of choice than participants who have a high level of trust.

Methods and data

In June 2014 we administered a survey to Dutch employees (N = 799, response rate 69 per cent). In December 2014 a follow-up survey was carried out among the same respondents (N = 720, and response rate 70 per cent). Because of attrition and selection criteria used (only employees younger than 65 years) the total sample on which this study is based was 652 respondents. The survey was conducted by the CentERdata, a survey institute of Tilburg University that maintains a large panel of households in the Netherlands (for details, see http://www.centerdata.nl/en/). The panel is representative of the Dutch population with respect to sex, age, education, and regional variation. Members of the panel were all interviewed through an Internet connection.[3] In general, people participate for about four years on the panel, during which time they are interviewed regularly on a variety of different topics. When a respondent leaves the panel, a new respondent is selected on the basis of matched socio-demographic characteristics, so that representativeness of the sample is maintained.

Dependent variables: choice preferences

To discover the different preferences for choice settings we asked all respondents to evaluate the desirability of (1) freedom of choice and (2) refraining from exercising individual choice and letting the pension fund make the decisions for four elements of pension contracts (denoted for short as 'delegated choice'). The four elements of the collective pension contract concern:

- *Level of pension savings*: the level of pension savings expressed as a percentage of wages;
- *Pension fund choice*: having the option to choose your own pension fund or be automatically enrolled;
- *Pension package*: The number of risks covered by the pension contract (level of old age income, invalidity pension, or a pension of your partner); and

- *Risk composition investments*: The level of risk with which pension savings are invested.

The exact wording of the questions for the case of freedom of choice is the following: "When you think about the situation at your pension fund, how important is it for you to have the freedom to choose with respect to the following matters?"

- That I save a lot or a little of my wages (and hence save) for my pension
- The pension fund of my choice
- The composition of my pension package (such as old age income, invalidity pension, or a pension for your partner)
- With how much risk my pension savings are invested

With the following answer categories: (1) Very unimportant; (2) unimportant; (3) neutral; (4) important; and (5) very important.

The wording of the question 'delegated choice' was designed to reflect the status quo in the Dutch pension system in which all decision with respect to accumulating pension rights are designed and carried out by the pension fund. We asked to following question to pension participants: "When you think about the situation at your pension fund, how important is it for you that following matters are automatically arranged for you?"

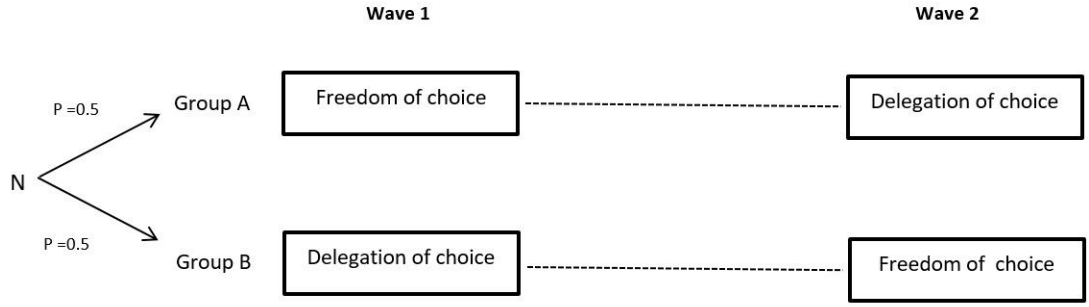
- That I save a lot or a little of my wages (and hence save) for my pension
- That I am automatically enrolled in the pension fund of my employer
- That I have a standard pension package (such as old age income, invalidity pension, or a pension for your partner)
- With how much risk my pension savings are invested.

The answer categories to this set of questions are the same as those referring to the 'freedom of choice' setting. Asking questions like those referring to the two choice settings above within one survey runs the risk of so-called carry-over effects: effects that "carry over" from one experimental condition to another. In our case, to ask respondents how important the freedom to choose is and immediately after this question asking for their assessment of the freedom not to choose, is a case in point. Whichever question is asked first within a survey, one cannot rule out that it will affect the response to the subsequent question. Respondents are

expected to be consistent and will thereby not give an unbiased answer to the question second in line. A common strategy to minimize these carry-over effects is to allow sufficient time to elapse between treatments and by splitting up the sample into two randomly selected subgroups (see (Lewis-Beck et al. 2003).

In this paper we used the following design. In the first survey, carried out in June 2014, we split the total sample N of pension participants into two randomly selected samples (A and B, see Figure 1).

Figure 1: Structure of the sample and sequencing of questions concerning freedom of choice



Sample A received the question to evaluate the possibility of freedom of choice for the above stated pension issues. The other group (sample B) was asked to evaluate whether they think it is important or unimportant for them to let all choices be determined by the pension fund. Comparing the answers of both subgroups at the same time offers the opportunity to see whether there exists support for both the option to have freedom of choice as well the option to delegate choice. In December 2014 the follow-up survey was carried out in which the questions were switched for both groups (at point wave 2 in Figure 1). Groups A and B had to evaluate the same elements of the pension contract. With a half year gap between the two surveys, we limited the risk of bias related to potential carry-over effects that can occur if the same respondents are subject to two experimental conditions (De Leeuw et al. 2008). Based on the result of the surveys, we present a typology of choice preferences.

Independent variables

To explain the differences in choice preferences we will focus on two variables offering a test of our hypotheses: solidarity and trust. The expressed level of solidarity with other pension participants is measured by asking respondents after a short definition of the principle of solidarity: "In your opinion, how important is the principle of solidarity with other participants within a pension fund?" (answer categories are 1 = very unimportant to 5 = very important).. The employee's level of trust in their own pension fund is measured by the following question: "Can you give an indication of how much you trust your current pension fund in governing your pension savings and rights?" (1 = no trust at all to 5 = trust completely). To minimize the carry-over effects and obtain unbiased opinions about these key variables, the trust question was asked at wave 1 and the solidarity question at wave 2.

Table 1: Descriptive statistics for explanatory variables

	Mean	Standard deviation
Expressed level of solidarity (5-point scale)	3.78	0.89
Trust in own pension fund (5-point scale)	3.42	0.95
Financial knowledge (5-point scale)	2.95	0.97
Age (in years)	45.1	10.5
Sex (male = 0)	0.42	0.49
Education		
Low	0.16	0.37
Middle	0.30	0.46
High	0.53	0.50

Note: N = 652.

In addition to these key variables in the analyses we controlled for age (in years), sex, education and their (self-reported) financial knowledge. Reasons for including these control variables is that socio-demographic profile matters when it comes to making financial decisions, although the influence of these factors may differ across countries (Agarwal et al. 2009, Engström and Westerberg 2003, Barber and Odean 2001).

Education is measured by three categories of highest attained educational levels: low = primary education or low vocational training); middle (high school or middle level vocational training: and high = university or high level vocational training). Financial knowledge was measured with the following item: "I know a lot about financial matters." (1= fully disagree to 5 = fully agree) The descriptive statistics for all variables used in the subsequent analysis are listed in Table 1 (a correlation matrix of all the variables is presented in the appendix to this paper).

Analyses

The analysis consists of two steps. First, we present frequencies for the importance of both freedom of choice and delegated choice separately, as well as a more refined typology of choice preferences by pooling the information in the 'free choice' and 'delegated choice' survey questions. Second, we analyze this typology using multinomial logit analysis. In this analysis we investigate the impact of trust and solidarity on choice preferences.

Results on freedom of choice typology

Importance of freedom of choice

The first results regarding the value of individual freedom of choice are presented in Table 2. These results suggest that freedom of choice is highly valued by pension participants. The data reveal that this is particularly true when choice concerns the level of risk with which savings are invested, but it is also prevalent in the case of the composition of the pension package and the level of savings. In each of these domains a (large) majority of employees states that freedom of choice is (very) important.

Table 2: The importance of freedom of choice in matters of the collective pension contract, pension participants in the Netherlands (percentages)

Individual choice with respect to:	very unimportant	Unimportant	neutral	important	very important	total
Level of pension savings	1.2	7.5	31.9	51.2	8.1	100.0
Pension fund	0.8	9.5	42.2	37.1	10.4	100.0
Pension package	0.3	4.9	31.3	53.2	10.3	100.0
Risk composition investments	0.3	2.6	19.2	53.4	24.5	100.0

Note: N = 652. The question in the survey was phrased as follows: When you think about the situation at your pension fund, how important is it for you to have the freedom to choose with respect to the following matters?"

Importance of delegation of choice

Table 3 presents the outcomes for the following question "When you think about the situation at your pension fund, how important is it for you that the following matters are automatically arranged for you?"

Table 3: The importance of delegated choice in matters of the collective pension contract, pension participants in the Netherlands (percentages)

Letting pension fund decide with respect to:	very unimportant	unimportant	neutral	important	very important	total
Level of pension savings	0.8	5.8	18.7	62.0	12.7	100.0
Pension fund	4.5	13.3	28.5	45.4	8.3	100.0
Pension package	0.0	3.9	21.2	61.8	13.3	100.0
Risk composition investments	0.9	4.6	20.4	51.8	22.2	100.0

Note: N = 652. The question in the survey was phrased as follows: "When you think about the situation at your pension fund, how important is it for you for you that the following matters are automatically arranged for you?"

If the attitudes towards freedom of choice measure were one dimensional, one would expect based on Table 3 that this group would not value the automatic arrangement of decisions very much. However, the results show a remarkably different if not counterintuitive picture if one takes a one-dimensional view of freedom. It suggests that the large majority of pension participants do not desire a freedom of choice and would very much like to let their pension fund take care of decisions. For instance, the finding that 75 per cent of respondents indicate that they find it (very) important that the level of pension savings is decided upon by their pension fund can hardly be seen as a sign that they value freedom of choice. The same can be said about the level of risk with which savings are invested (74 per cent find it important that the pension fund takes care of this decision).

Typology of choice preferences

In this section, we present a typology of respondents by pooling the answers to the two questions on freedom of choice and the delegation of choice as shown in Tables 2 and 3. We collapsed the five response categories into three categories - (very)unimportant, neutral, very(important) - because the numbers in each cell are too small to carry out reliable statistical analysis. Based on participants' answers, we constructed a typology that is depicted in Table 4.

Table 4: Typology of choice preferences

	Value of delegated choice		
Value of freedom of choice	Not (very) important	Neutral	(Very) important
Not (very) important	0	1	2
Neutral	1	1	2
(Very) important	3	3	4

We distinguish five types of pension participants (and the numbers in Table 4 correspond to these categories), namely:

(0) *Unimportant*. These are the respondents who assess freedom of choice and the delegation of choice as unimportant;

(1) *Neutral*. These are the respondents who assess freedom of choice and the delegation of choice as either neutral; or who considered one of the options (freedom or delegation of choice) unimportant and who was neutral towards the other.[4]

(2) *Delegation of choice*. These are the respondents who assess delegation of choice as important and they assess the freedom of individual choice as either neutral or unimportant

(3) *Freedom of choice*. These are the respondents who assess the freedom of choice as important and the delegation of choice as either neutral or unimportant;

(4) *Both settings important*: These are the respondents who assess both the freedom of choice as well as the delegation of choice as important.

The distribution of choice preferences for the five categories or types of pension participants is presented in Table 5.

Table 5: Refined choice preference ordering in matters of pensions, pension participants in the Netherlands (percentages)

	Refined choice preference ordering					
Pension choice domain:	Unim-portant	Neutral	Delegation of choice	Freedom of choice	Both choice settings important	Total
	(0)	(1)	(2)	(3)	(4)	
Level of pension savings	0.0	10.1	30.5	15.2	44.2	100.0
Pension fund	1.5	18.6	32.4	26.2	21.3	100.0
Pension package	0.0	10.7	25.8	14.1	49.4	100.0
Risk composition investments	0.0	7.5	14.6	18.4	59.5	100.0

Note: N = 652.

Pooling the outcomes for the two questions shows that a diversity of preferences exists; a diversity which may give rise to counterintuitive outcomes if one does not acknowledge that freedom can have different meanings or connotations as indicated by Berlin (1958). If we look at the separate pension domains, on which participants had to express an opinion, a number of observations can be made.

First, the category of participants desiring freedom of individual choice is a minority and varies per domain (14-26 per cent). It should be noted that participants do not have the same preferences for each and every domain. Some want freedom in just one domain and others want freedom in two or more domains. If one calculates the percentage of participants (not shown in the table) who value individual freedom for *all four* domains this group is extremely small: two per cent.

Second, the category of participants who desire a delegation of choice is for most pension domains larger than the group of participants who desire freedom of choice (only in the case of investment choices is delegation a smaller percentage).

Third, the category of participants who value both the freedom of choice as well as the possibility of delegated choice is for some domains clearly important and the dominant preference (see risk composition of investments, where approximately 60 per cent of the participants fits this categorization). The fact that this category of participants exists and is not negligible shows that a one-dimensional view of the freedom to choose may hamper an understanding of the way participants view freedom.

Fourth, a small percentage - but certainly not a negligible percentage (8-19 per cent) – of participants is neutral with respect to whether they value freedom of choice or a delegation of choice. This relatively small group may shed light on the divergence in looking at choices as perceived by economists and psychologists as noted by Johnson and Goldstein (2003). Economists trained in the neoclassical tradition assume that preferences exist and are revealed by actions, whereas psychologists and behavioral economists (Kahneman and Tversky 2000, Payne et al. 1992) view preferences more as being constructed when people have not thought about a topic before. The power of defaults may in large part derive from the existence of a group of people whose preferences still have to be constructed. Our derived group of indifferent pension

participants may be a reflection of the fact that pension participants are truly indifferent or that preferences are still 'under construction'.

Finally, the category of pension participants who consider both choice settings unimportant is a negligible category, which suggests that the issue of choice matters to participants even though they do not always have a clear preference.

Who desires individual choice and who does not?

The typology of choice preferences presented in the previous section begs the question whether there are substantial differences across the various pension participants. Are the participants who opt for freedom of choice also the people displaying low levels of solidarity and low trust in their pension fund. And does the opposite apply to participants who opt for delegating all choices to their pension fund? To test the *trust hypothesis* and the *solidarity hypothesis* we have performed a multinomial logit analysis. We expect that freedom of choice is associated with a low level of solidarity with other participants in a pension fund, and low level of trust in the pension fund in which one has accumulated pension rights.

Table 6 presents the results of this (multinomial) regression analysis where for each separate pension domain two models are estimated. To see the contribution of the trust and solidarity we present first the models with only the control variables (columns 1-3), and in the columns 4-6 the full model (trust and solidarity plus control variables). Coefficients are presented in the form of relative risk ratios: the risk of the outcome relative to the base outcome, which in our case is the category 'delegation of choice'. A coefficient higher than 1 signifies a positive relationship, and lower than 1 a negative relationship.

The results show strong support for the solidarity hypothesis. The expressed level of solidarity is the variable that has the strongest association with the various choice domains. If we restrict our attention to simply the choice between refraining from individual choice and having freedom of choice (column (4) in Table 6) it appears that the higher the level of solidarity of pension participants the less likely they belong to the category 'freedom of choice' compared to category of 'delegation of choice'.

Table 6: Multinomial logit analysis of choice preference for the four separate pension instruments

	Preference ordering (Delegation of choice is reference category):					
	Model with only control variables			Full model		
	Freedom of choice	Both settings important	Neutral	Freedom of choice	Both settings important	Neutral
	(1)	(2)	(3)	(4)	(5)	(6)
Choice with respect to[a]:	RRR	RRR	RRR	RRR	RRR	RRR
Level of pension savings						
Expressed level of solidarity	-	-	-	0.55***	0.80*	0.69**
Trust in own pension fund	-	-	-	0.63***	0.85	0.76*
Age (in years)	0.97***	0.98	0.98*	0.98	0.99	0.99
Sex (male = 0)	1.01	1.07	1.24	0.97	1.05	1.20
Education (low=0)						
Middle	0.73	0.70	0.43**	0.76	0.72	0.44**
High	0.55	0.45***	0.22***	0.70	0.50**	0.26***
Financial knowledge	1.25*	1.26**	1.16	1.33**	1.29**	1.21
Pseudo R^2		0.02			0.04	

Table 6, continued

Pension fund	Model with only control variables			Full model		
	Freedom of choice	Both settings important	Neutral	Freedom of choice	Both settings important	Neutral
	(1)	(2)	(3)	(4)	(5)	(6)
Expressed level of solidarity	-	-	-	0.55***	1.06	0.81
Trust in own pension fund	-	-	-	0.55***	0.76**	0.81*
Age (in years)	0.99	1.01	0.99	1.00	1.01	1.00
Sex (male = 0)	0.99	1.32	1.04	0.93	1.35	1.02
Education (low=0)						
Middle	0.86	1.23	0.78	0.90	1.31	0.80
High	1.00	0.96	0.84	1.40	1.10	0.96
Financial knowledge	1.22*	1.03	0.97	1.33**	1.08	1.01
Pseudo R^2		0.01			0.04	

Table 6, continued

	Model with only control variables			Full model		
Pension package	Freedom of choice	Both settings important	Neutral	Freedom of choice	Both settings important	Neutral
	(1)	(2)	(3)	(4)	(5)	(6)
Expressed level of solidarity	-	-	-	0.58***	0.91	0.65***
Trust in own pension fund	-	-	-	0.80	0.90	0.89
Age (in years)	1.00	1.00	0.98	1.01	1.01	0.99
Sex (male = 0)	1.56	1.13	1.54	1.51	1.13	1.50
Education (low=0)						
Middle	0.99	1.00	0.54	0.99	1.02	0.54
High	0.77	0.85	0.33***	0.89	0.90	0.36**
Financial knowledge	1.23	1.28**	1.01	1.24	1.30**	1.02
Pseudo R^2		0.01			0.03	

Table 6, continued

Risk composition investments	Model with only control variables			Full model		
	Freedom of choice	Both settings important	Neutral	Freedom of choice	Both settings important	Neutral
	(1)	(2)	(3)	(4)	(5)	(6)
Expressed level of solidarity	-	-	-	0.69**	0.86	0.91
Trust in own pension fund	-	-	-	0.79	0.78*	1.04
Age (in years)	0.96***	0.98	0.97**	0.97**	0.99	0.97*
Sex (male = 0)	2.47***	1.28	0.93	2.43***	1.27	0.90
Education (low=0)						
Middle	1.01	1.02	0.44*	1.03	1.07	0.43*
High	1.13	0.93	0.35**	1.32	1.09	0.35**
Financial knowledge	1.03	0.97	0.77	1.07	1.01	0.76
Pseudo R^2		0.03			0.04	

Note: (a) The neutral category encompasses the categories (0) and (1) of Table 4. N = 652. *** p < 0.01; ** p < 0.05; * p < 0.1

The relative risk ratio of 0.55 connected to the level of pension savings denotes that if a subject were to increase his or her solidarity score by one unit, the relative risk of being the type who wants 'freedom of choice' relative to the type who wants 'delegation of choice' would be expected to decrease by a factor of 0.55, given the other variables in the model are held constant.

To a lesser extent, the estimation results show that the trust participants have in their pension fund does not have a substantial effect across all domains and choice categories. But for those cases where one can trace the influence of trust - the level of pension savings and the pension fund choice – the trust hypothesis cannot be rejected: the more one trusts the pension fund, the less one is in favor of free individual choice and the less one is indifferent.

With respect to the control variables the results show that the are no clear gender effects on the choice preferences, except for female participants who are far more in favor of free choice than men concerning the risk composition of pension investments. A possible interpretation why the current study finds women more willing to be in charge of their pension investments may be related to the robust findings that women are generally more risk averse than men in making financial decisions (Van Rooij et al. 2007; Watson and McNaughton 2007, Jianakoplos and Bernasek 1998). In case they expect that that their pension fund does not match their (lower) taste for risk, they are more likely to express the desire to be in charge of their investments. This belief seems plausible. Pension funds are organizations known to be dominated by male employees and executives, and as Barber and Odean (2001) show for the case of the US men tend to display overconfidence in taking investment risks and excessive trading compared to women. Men tend to react more to short-term, 'noisy' information than women who appear to act as long-run investors whose strategy is to ignore short-term market movements.

A final note on the impact of control variables is related to the variable 'financial knowledge'. This proved to be a statistical significant predictor of choice preferences with respect to level of pension savings and the issue of pension fund choice: people with more financial knowledge have a stronger preference for making their own decisions on the level of pension savings and the pension fund.

Conclusions and discussion

Do pension fund participants really want freedom of choice? This question is at the forefront of countries which are in the process of reforming their pension system. But it is also a question that transcends the terrain of pensions and can be applied to society at large (Sunstein 2015).

The results of our study offer a number of novel insights about measuring the desired freedom of choice in matters of pension finance. Freedom has a positive connotation and this also comes across in our results. Simply polling participants with respect to the issue of free choice, as is done in political and marketing campaigns, does not yield a straightforward answer. We discovered that quite a large number of participants appreciate having the option of free choice as well as the option of delegated choice, i.e. letting their pension fund take care of decisions. This outcome suggests that there are more dimensions to freedom than is commonly perceived or assumed. By pooling the information from both survey questions we offer a more refined typology of choice preferences for a number of important domains of pension decision making.

Besides the fact that a small percentage of people are indifferent with respect the issue of choice, the results show that the percentage of pension participants who want complete freedom of choice is also small, although not negligible. This corresponds well with the finding for the Netherlands by Van Rooij et al. (2007) who show that the Dutch are reluctant to take control of their retirement investments. However, the findings from this paper extend this result to more domains of pension finance. Most participants either opt for the status quo (letting all decisions be dealt with by their pension fund) or a mixed model in which they both find free choice as well as this type of delegated choice important. The latter category seems to have close links to what has become known as ‘soft paternalism’ or ‘libertarian paternalism’ (Sunstein and Thaler 2003). This result suggests that the two concepts of freedom to which Berlin (1958) was referring are important. The category of participants who want freedom of choice as well as a delegation of choice - seems to merge the concepts of negative freedom of having no restraints with the concept of positive freedom of being in control of one’s life and destiny.

A second contribution concerns the profile of those who want freedom of choice for a particular domain of pension finance. For all domains of pension finance, the expressed level of solidarity is an important predictor: a relatively low level of solidarity is associated with a desire for freedom of choice. To a lesser extent the trust in their pension fund is of importance in

explaining choice preferences: relatively low level of trust is associated with the desire for freedom of choice.

It is important to acknowledge that our study has several limitations. The first limitation concerns the generalizability of the findings across countries and across pension domains. Circumventing this limitation can only be done by replicating this study across time and place to be certain that the typology of choice preferences is robust and has predictive power.

A second limitation involves the fact that the questions were posed in a country that has, according to some (Ambachtsheer 2011), one of the top of pension systems in the world (Mercer 2015), but the current system is also one that does not allow much choice. Therefore, most Dutch are not personally acquainted with making big pension decisions. These decisions have been delegated by design to the national government when it comes to the public pension system; and these have been delegated for the case of supplementary pensions to the government as sponsor and regulator, and on a day-to-day basis to representatives of employer organizations and unions when it comes to the governance of pension funds. In this setting it may be hard to for participants to really value the freedom of choice and hence stick to the status quo.

Despite these limitations, the method and results presented in this contribution may offer food for thought for policy makers who contemplate the introduction of more freedom of choice or who try to restrict to the use of freedom. Pension funds across the world diverge in offering choice (Whiteford and Whitehouse 2006, Garcia-Huitron and Ponds 2015). And both sides of the spectrum - those systems allowing complete freedom of choice like the US and New Zealand and those systems where choice is (virtually) absent like in the Netherlands - have difficulties in reforming their system and making individual choice work. One of the reasons why this is so may be because freedom of choice is a concept that has more dimensions than is commonly perceived by policy makers with neoliberal orientation who tacitly assume that everyone desires freedom of choice. Our exploratory work shows suggests that this is a misguided assumption Designing pension reforms requires policy makers to take people as they are in real life: a diverse group of people with an equally diverse set of choice preferences.

Appendix

Table A1: Correlation matrix of variables underlying those used in multinomial logit analysis

	Ch 1	Ch 2	Ch 3	Ch 4	Del 1	Del 2	Del 3	Del 4	Age	Sex	Edu	Finance	Trust	Solidarit
Choice 1	1.00													
Choice 2	0.35*	1.00												
Choice 3	0.38*	0.43*	1.00											
Choice 4	0.40*	0.36*	0.29*	1.00										
Delegation 1	-0.08	-0.04	-0.01	-0.06	1.00									
Delegation 2	-0.18*	-0.21*	-0.10*	-0.14*	0.34*	1.00								
Delegation 3	-0.06	-0.04	0.06	-0.03	0.39*	0.33*	1.00							
Delegation 4	0.10	0.12*	0.09	0.15*	0.32*	0.12*	0.30*	1.00						
Age	-0.07	0.04	0.07	-0.05	0.12	0.09	0.07	0.15*	1.00					
Sex	0.05	0.06	-0.01	0.07	-0.01	0.05	-0.06	-0.07	-0.15	1.00				
Education	-0.08	-0.03	-0.04	0.05	-0.03	-0.03	0.03	-0.06	-0.26*	0.09	1.00			
Finance kn.	0.03	0.04	0.12*	0.05	-0.04	-0.06	0.05	-0.01	0.02	-0.22*	0.07	1.00		
Trust	-0.17*	-0.19*	-0.03	-0.13*	0.12*	0.18*	0.07	-0.03	0.17*	-0.04	0.16*	0.16*	1.00	
Solidarity	-0.16*	-0.13*	-0.03	-0.10*	0.20*	0.25*	0.23*	0.07	0.19*	-0.07	-0.00	0.00	0.20*	1.00

Note: choice settings numbers refer to (1) level of pension savings; (2) pension fund choice; (3) pension package; (4) risk composition of investments.

* denotes $p < 0.01$

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Notes:

[1] Besides these internal factors, fiscal and pension institutions may not be adequately adapted to facilitating especially low income earners to participate in voluntary savings programs as Casey and Dostal(2013) show for the cases of Germany and the UK.

[2] This also applies to growing number of self-employed who have to take care of their own pension arrangements in the third tier but who generally forego this arrangement because it costs too much Hershey, Van Dalen, Conen and Henkens (2017).

[3] Participants who did not have Internet access were provided with a facility by CentERdata, which allowed them to access the Internet (either through their televisions or by giving them an internet subscription for their PC, and when lacking a PC, are provided with a simple PC with internet connection. As such, there was no selectivity with regard to whether people had access to the Internet or not.

[4] We have not dissected these categories into smaller as someone who does not consider, e.g. choice important and is neutral with respect to 'no choice' is still at most indifferent with respect to one option. And as it turns out, the 'not important' group is negligible making categories 1-4 the most interesting.