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## Good job, good pension? The influence of the workplace on saving for retirement

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### Abstract

Most private-sector employees in the United Kingdom (UK) are automatically enrolled into individualised defined contribution (DC) pension accounts. In a DC environment, income adequacy in retirement is highly dependent on the decisions that individuals make earlier in their lives. The ease with which they move into employment, and the pension support that they then receive from their employer, can be critical in determining outcomes. This paper discusses how employees respond to workplace pension schemes and the circumstances under which they assess the suitability of their contributions. The findings are based on an embedded case study comprising qualitative interviews with 25 employees of a large UK utility company. Participants were selected on the basis of socio-economic similarity. The research concluded that fixed-term employment negatively impacted on saving for retirement, both with respect to scheme membership and to the level of saving. Furthermore, it was found that the employment context had an influence upon retirement savings behaviour. The proactive approach of the employer in providing retirement benefits, and the trust that employees had in their employer, positively influenced membership and contribution levels. In addition to employer endorsement effects, both the encouragement of older work colleagues and workplace norms had a role to play in influencing how successfully individuals prepared for retirement.

**Keywords:** workplace pensions; job insecurity; employer trust; workplace norms; automatic enrolment

### Introduction

Between October 2012 and December 2017, the United Kingdom (UK) introduced nation-wide automatic enrolment into workplace pension schemes (the 2007 Pensions Act). Automatic enrolment was developed in response to policy concerns about low pension scheme membership, particularly in the private sector, and to the rise in the number of individuals who would be almost entirely reliant upon the state pension in retirement (Pensions Commission 2006). The adoption of automatic enrolment into the 2007 Pensions Act was influenced by concepts from behavioural economics that seek to explain sub-optimal savings behaviour by including psychological biases and cognitive limitations into economic theory

(Thaler and Sunstein 2008). The underlying assumption is that automatic enrolment is effective because it utilises the strength of the *status quo* bias as a counter to myopic under-saving for retirement (Madrian and Shea 2001).

Arguably, automatic enrolment has been successful in achieving the poverty alleviation aims of the legislation: pension scheme membership increased from 55 per cent of eligible employees in 2012 to 78 per cent by April 2016 (Pensions Regulator 2017: 9). However, most individuals do not save for retirement simply to avoid poverty – many seek to obtain an earnings-related pension which will enable them to maintain a tolerable standard of living in retirement (Department for Work and Pensions (DWP) 2013). It is not clear that automatic enrolment, however successful it might be in increasing pension scheme membership, fully addresses the public's wish for earnings-related pensions.

Obtaining an earnings-related retirement income in a defined contribution (DC) environment is particularly challenging for those UK employees on middle-to-high incomes (DWP 2013). These individuals face three main challenges. Firstly, the state has gradually withdrawn from the provision of earnings-related pensions (Pensions Policy Institute 2015) and, because the relative importance of the meagre flat-rate state pension decreases as one moves up the salary scale, the better-paid need to make additional provision if they wish to maintain their standard of living following retirement.

Secondly, automatic enrolment, as it is currently envisaged, contains elements that may counteract individual efforts to increase contributions. The legislation includes an eventual employee default contribution level of 5 per cent but this level was chosen only to avoid discouraging the low-paid from saving for retirement (DWP 2013). There is a risk that the legislated contribution default setting is too low to meet income replacement needs in retirement for all but the lowest paid, but, because automatic enrolment is endorsed by the government, better-paid employees may mistakenly assume that contributing at the default will be sufficient (McKenzie, Liersch and Finkelstein 2006). Although both employees and employers have the flexibility to increase contributions, the willingness to encourage supplementary saving varies between employers.

The final problem is that the impacts of changes to workplace pension schemes – notably the shift from defined benefit (DB) to defined contribution (DC) – have fallen disproportionately upon employees in the private sector. The link between pre- and post-retirement income has been broken as private-sector employers have retreated *en masse* from the provision of guaranteed DB pensions (Pensions Policy Institute 2015). The last 15 years has seen a sharp decline in DB pensions to the point where almost all workplace pension schemes in the private sector are now contribution based (Office for National Statistics (ONS) 2017). These pension schemes are organised by the employer but with contributions held in market-linked individual accounts and, hence, with no guarantee that final fund values will meet retirement needs. Although employers are obliged to contribute 3 per cent of salary<sup>1</sup> to their enrolled employees' workplace pensions, they retain considerable flexibility over the generosity of additional benefits, the selection of pension scheme administrators and the investment funds available to members.

One important feature of automatic enrolment is that employees do not need to make any investment decisions at the point of enrolment – in addition to a

minimum default contribution, all qualifying pension schemes must now have a default investment fund. Nevertheless, responsibility for assessing whether investment performance meets long-term goals lies with the individual. Thus, there is some contradiction in current occupational pension policy. It is assumed that employees are unable to behave rationally and voluntarily spread consumption and saving over the lifecourse (hence the introduction of automatic enrolment), but, at the same time, there is an expectation that individuals will be able to make decisions about the appropriateness of their investments to meet retirement needs. This contradiction, incidentally, is even more apparent when the individual comes to retire and is faced with the problem of translating investment funds into income. Although that discussion is outside the remit of this particular paper, the challenges that future pensioners will face *vis-à-vis* decumulation makes it even more important that the process of building pension savings is optimal.

Under the current legislation, employers choose both which pension provider to use to administer their workplace pension scheme and which investment fund to select as the default fund. It is not known to what extent these employer-driven choices influence the dynamic decision-making processes that underlie individuals' retirement savings behaviour. To date, there has been little UK research that specifically investigates the relationship between the actions of the employer and how successfully individuals manage to prepare for retirement (Gough and Niza 2011). In particular, little is known about how employees on above-average earnings view the suitability of their employer's pension scheme contribution and fund defaults to meet their retirement needs. To that end, this paper discusses the better-paid's response to employer-provisioned DC workplace pension schemes, and examines to what extent the working environment influences their pension decision-making.

The article proceeds with a short discussion of the literature that might shed light on this enquiry. This is followed by a description of the methods adopted in the research and the background to the study. The key findings follow under the thematic headings of job security, membership norms and employer endorsement. The discussion concludes that including the employment experiences of individuals in the research framework is helpful in understanding retirement savings behaviour.

## Literature

Much of the workplace pensions literature in the UK draws upon demographic variables such as age, gender and education in evaluating variations in savings rates (Gough and Niza 2011). Generally, the low paid, the young, women and the poorly educated are least likely to have adequate retirement provision (Banks *et al.* 2005; Bourne, Shaw and Butt 2010; Clery, Humphrey and Bourne 2010; ONS 2017). Affordability is the explanation offered most frequently by those choosing not to join an employer's pension scheme (Bourne, Shaw and Butt 2010; Clery, Humphrey and Bourne 2010; DWP 2014). Many policy cancellations reflect affordability issues: cancellations are highest following changes in personal circumstances, such as deteriorating health or marriage breakdown (Smith 2006). Membership, contribution levels and contribution persistence increase with salary (Banks *et al.* 2005), although there are still considerable differences in the level of retirement

preparedness between individuals with similar incomes (Meyer and Bridgen 2008; ONS 2017) and looking at the relationship between income and retirement saving in isolation does not fully explain these discrepancies. The shift from the relative security of DB pensions to the more precarious DC pensions that has become prevalent in much of the UK private sector may be one explanation (Meyer and Bridgen 2008). However, because much of the existing research has focused on issues of low scheme participation and pensioner poverty, the exploration of post-enrolment contribution increases has usually been regarded as a subsidiary issue. Little attention has been given to the issue of pension adequacy for those whose earnings are well above the poverty line – possibly because the relative wealth of the current cohort of the ‘just retired’ obscures the potential lifecourse disadvantages of subsequent cohorts (Foster 2012).

### **Age and gender**

One consequence of automatic enrolment has been a downward shift in the mean age of first-time enrolment into workplace pension schemes (ONS 2017). However, voluntary pension contributions increase with age (ONS 2014) as does deviation from contribution defaults in auto-enrolled schemes (Beshears *et al.* 2010). Relative youth is also associated with lack of interest in pensions and this may be particularly relevant to young female employees (Foster 2017). Historically, women had lower membership of occupational pension schemes (Gough 2004; ONS 2014) and pension contribution persistence is also lower for women (Smith 2006). The part-time, temporary and poorly-paid nature of many women’s employment is one explanation (Foster 2012; Ginn and MacIntyre 2013; Price 2007), with employer pension provision often being less generous (Sefton, Evandrou and Falkingham 2011), although membership trends amongst part-time female employees have increased since automatic enrolment (ONS 2017). Inroads into educational and gender equality in many occupations also mean that, although still gendered, women’s experiences are now widely diverse and may be explained by other socio-economic variables (Clery, Humphrey and Bourne 2010; Ginn and MacIntyre 2013). Nevertheless, the motherhood penalty for higher-earning women hoping to achieve earnings-related retirement income is still of relevance (Pensions Policy Institute 2016). In addition, researchers have demonstrated gendered differences in attitudes to pension investment risk – women appear to display greater risk aversion with market-linked investments (Clark and Strauss 2008) – a point that is of particular relevance in a DC environment.

### **Information**

Education may also be of importance in a DC environment where greater financial literacy is positively associated with asset accumulation (Huberman, Iyengar and Jiang 2007; Lusardi, Michaud and Mitchell 2011). The provision of employer-sponsored education schemes appears to have a positive effect upon participation in workplace pension schemes and upon contribution rates (Clark, Lusardi and Mitchell 2016; Kaiser and Menkhoff 2016). This would imply that the source of financial advice, and the context in which it is delivered, are important. The importance of

context in financial decision-making is a point also emphasised by Strauss (2008). Additionally, researchers highlight the influence of colleagues' choices on retirement savings (Duflo and Saez 2002, 2003) and point to the relevance of social norms (Bailey, Nofsinger and O'Neill 2004). A possible explanation for why colleagues might impact on individual reactions to enrolment in pension schemes is that under conditions of uncertainty, individuals may assume that others are more knowledgeable than themselves and draw inferences from their behaviour (Cialdini 2008). 'Observational learning theory' highlights that some individuals defer to the decisions of others rather than seek their own information – so-called *allelomimetic* behaviour (Bikhchandani, Hirshleifer and Welch 1992). This is particularly prevalent when individuals are making parallel decisions involving uncertain rewards, which is the case with enrolment in DC pension schemes.

### **Pension scheme design**

Beshears *et al.* (2009) suggest a link between the socio-economic similarity of a workforce and the degree to which its members adhere to pension scheme defaults but they maintain that it is the architecture of the pension schemes, in particular, automatically enrolled defaults, that is critical in directing contribution behaviour (Beshears *et al.* 2007, 2009). Employer generosity in the form of matching contributions raises contribution rates (Beshears *et al.* 2007) but the upper limit of an employer's match may also constrain contributions by those who might otherwise contribute more (Huberman, Iyengar and Jiang 2007). One explanation of this phenomenon is that scheme defaults are interpreted as recommendations from the employer (Beshears *et al.* 2009, 2010; Madrian and Shea 2001). The information signal of the scheme design acts to emphasise the risk of deviating from scheme defaults. Integral to this endorsement effect is the role of trust (for a review of the trust literature, see Vickerstaff *et al.* 2012) and the complexity of the decision facing the employee (Sunstein 2017).

### **Employment context**

The importance of continued employment throughout the lifecourse for income sufficiency in retirement is recognised (Dewilde 2012), but only a few UK-based studies have considered the relevance of career trajectories (Meyer and Bridgen 2008; Sefton, Evandrou and Falkingham 2011) in achieving pension adequacy. Consequently, we have little understanding of how the changing employment context (or indeed, employee benefits), shape retirement savings behaviour. This lack of research interest in the relationship between employee and the employing organisation is surprising given that there is considerable variation in scheme membership both across occupations and between employers (ONS 2014). Logic tells us that these variations in scheme membership indicate that the employer–employee relationship is of relevance. One area of importance may be the implicit beliefs in the reciprocal obligations between employee and employer. Westerman and Sundali (2005) observe that there has been a shift from a 'relational' approach to employment, where employees expect a long-term relation with their employer, based on loyalty and job security, to a 'transactional' approach based primarily on financial

remuneration. They argue that this change in expectations may have been exacerbated by the shift from DB to DC pensions, and they see a link between transactional approaches to employment and greater employee focus on immediate, rather than deferred, compensation. Furthermore, transactional employment relationships may encourage job turnover through the use of agency workers and short-term employment contracts (Fudge and Strauss 2013). Job turnover matters because of the potential association between labour market attachment and pensioner income (Dewilde 2012), poor employee benefits (Fudge and Strauss 2013), low pension scheme membership (Gough and Niza 2011) and opting out of auto-enrolled pension schemes (DWP 2014).

## Research methods

The data for the study were gathered from the semi-structured interviews of 25 individuals. It was recognised from the outset that there might be limitations to individual interviews because it is not known to what extent retirement savings behaviour is primarily actor-led, and to what extent it is a consequence of employer provision. The response to this uncertainty was to design the research as an embedded case study and to focus upon multiple, but relatively homogenous, employees of a single employer. This embedded case approach had the potential to eliminate situational variables that might otherwise risk obscuring our understanding of the extent to which experiences shape responses. For instance, existing research points to the influence of pension scheme architecture on savings behaviour (Beshears *et al.* 2009) and so, one benefit of limiting the investigation to the employees of a single employer was that it provided confidence that all the participants had access to the same workplace pension scheme. Moreover, although there may be localised differences in the participants' work environment, it was possible to eliminate contractual variables such as workers' benefits, access to pension information and, indeed, employment prospects, all of which have the potential to influence retirement savings behaviour. This approach enabled the research to focus on the participants' journey to their present savings position and understand why there were variable responses to the current employer's pension scheme.

At the time of the interviews (2013), the employer had, for the previous seven years, been voluntarily automatically enrolling new employees into its DC pension scheme. Employees hired prior to automatic enrolment, or who subsequently opted out, were able to elect to join the scheme. The employee default contribution rate was 3 per cent although subsequent changes were permitted and there was no upper contribution level. The employer matched employee contributions up to a maximum of 6 per cent. The company also awarded a loyalty bonus of an additional 3 per cent after five years' service, and a subsequent 3 per cent loyalty bonus after 10 years of service. Thus, a long-term employee contributing at 6 per cent would receive an employer contribution of 12 per cent.

The study was conducted just prior to the company's automatic enrolment staging date and, at that point, participation in the company's pension schemes was running at well over 85 per cent, although following legislated automatic enrolment, this rose to approximately 95 per cent. These participation levels are considerably higher than the national average (Pensions Regulator 2017).

### **Participant selection**

The strategy used to select participants and to analyse the data was based upon Mill's Method of Difference in which similar cases are examined to uncover possible explanations of different outcomes. Similarity was operationalised in terms of income, age and education. All participants earned between £27,000<sup>2</sup> and £40,000. This salary band was selected because, at these income levels, there was unlikely to be any interaction with state benefit withdrawals or higher-rate tax liabilities – factors that might distort savings motivations. Participants were all aged between 30 and 40 at the time of the study. These ages were chosen because, typically, younger employees have little knowledge of, or interest in, retirement saving (Foster 2017), and most older employees at the parent company had pre-existing entitlement to DB pensions that may have confounded the data. All of the interviewees had tertiary education although the timing and route of acquiring this education varied: generally, better-educated individuals view retirement saving more positively (Clery, Humphrey and Bourne 2010). No other demographic features were used to select participants purposely. There were a disproportionate number of Scottish participants (because of researcher travel constraints) but ethnicity was broadly representative of the UK population. The sample included 14 males and 11 females and the ratio is indicative of the gender balance at the employing organisation. The 25 participants varied considerably in their pension preparedness: a few had been saving into pensions their entire working lives, but several had fewer than five years' contributions. The majority had been automatically enrolled in their current employer's scheme but one-third had actively joined the scheme (mostly following a period of non-membership) and two were not members. Employee contributions varied from 3 to 9 per cent and employer contributions varied from 3 to 12 per cent.

### **Data collection and analysis**

The interviewees were invited to participate in the study having been identified from responses to a company-wide workplace survey (N3457) designed by the researcher (Robertson-Rose 2016). This survey included a financial literacy test based upon the Organisation for Economic Co-operation and Development (OECD) guidance for measuring financial literacy (OECD 2013) and all the participants obtained an above-average score. Interviews were held in six workplace locations across the UK and lasted approximately one hour. The researcher conducted the interviews using a pre-prepared, but open-ended, interview schedule initially developed on the basis of a pilot study. The aim was to build up a history of participants' engagement with pensions. Respondents were asked to reflect on their retirement savings experiences, their choice of contribution rate and investments, and the circumstances under which they had altered these both in their current employer's schemes and in previous schemes. The interviews were recorded and transcribed. The initial open coding stage involved the organisation of the data using descriptive coding and initial pattern coding. Emergent themes were used to inform the questioning in the subsequent interviews. Use was then made of the constant comparative method, in which the newly acquired interview data



were compared to the existing data. In this way, the data collection and analysis developed as an iterative process.

## Findings

The main finding from this study is that the influence of the working environment permeates the entire process of retirement saving. Firstly, fixed-term employment negatively impacted on saving for retirement, both with respect to scheme membership and to the level of savings. Secondly, the proactive stance of the employer towards pension scheme membership, and the encouragement of colleagues, positively influenced membership and contribution levels. Thirdly, high levels of trust in the employer were prevalent and this was connected to willingness to accept the pension scheme defaults.

### *The importance of job security*

Although all of the participants in this study were in relatively well-paid permanent employment, many had career histories that included periods of under-employment, part-time work and temporary assignments. Job insecurity and erratic employment were offered as an explanation for not saving for retirement and participants drew a distinction between ‘jobs’ and ‘careers’ when thinking about occupational pensions. How committed individuals were to their careers, and how settled they felt in their personal lives, was viewed as important for future planning; entering ‘career’ employment could act as a catalyst for reflecting upon retirement saving. The data suggest that fixed-term contracts negatively impacted upon pension scheme membership and contribution levels. For example, several participants had either not joined or had opted out of workplace pension schemes in the past due to the temporary nature of their contract.

Although the employment contract was important, how participants themselves viewed the permanence of their position was also of significance. A theme running through the interviews was the expectation of job mobility. Many participants had believed that they would remain with their current employer for only a short period of time and several offered this as an explanation for either not enrolling in the pension scheme, or for opting out after having been enrolled:

Yeah, that’s always in the back of my mind. It was always a case of I’m not going to be here long term so, you know, it wasn’t necessary to enrol. (Interviewee B)

This behaviour stems partly from a reluctance to accumulate numerous small pension pots and partly from an assumption that pension funds would be left behind when the employee moved:

Yes, that’s what it was. It was kind of ‘do you want to start a pension?’ And I was like, not really any point because I don’t know how long I am going to be here sort of thing. I was only in companies six months to a year and always changing so I would have loads of different pensions everywhere. (Interviewee F)



Participants attached little importance to acquiring small pension pots and appeared to be approaching pension saving from an employer-centric basis; viewing pensions as being primarily linked to employment (a characteristic of DB schemes) rather than being portable individualised assets. Although some participants understood that DC pension pots could usually be transferred to the new employer, this point was most often made by those participants with single large pots. Transferring was seen as a burden because of both the administration involved and the perceived complexity of the decision. There was a prevalent belief that small pensions from earlier careers were somehow 'lost'. The cumulative effect of this type of thinking was that the participants with the most broken career histories usually had the most broken pension contribution records. The issue of small pension pots was most pertinent to the non-UK nationals; this small group were less likely to feel settled, and hence committed, to long-term saving. Uncertainty about the portability of pension assets added to their reservations about increasing contributions.

Interwoven into the discussions about 'jobs' and short-term assignments was an indication that careers were conceptualised in terms of permanence and progression:

I want to settle down, stop jumping about and stay at one company and try and move myself up the ladder instead of jumping for a pound difference an hour. (Interviewee F)

It was not always easy to disentangle the relative influence of the temporary nature of employment and lack of perceived opportunities for progress, but there is evidence that stable careers were connected to critical thinking about retirement saving. For example, for those participants who had been automatically enrolled, the transition to a permanent position could act as a catalyst to examine current contributions:

My contract got changed from a year contract to a permanent contract and that was the thing that, yes, it was, at the end of January, that's when my contract switched, so it's actually not that long ago, so it made me think I'm going to be here for longer than I thought, so it's time to sort out what I'm doing. That was the stimulus to do it. (Interviewee K)

There was some self-admonition for lack of pension saving (*e.g.* using expressions such as 'I ought to save'), but self-chastisement did not feature when individuals discussed retrospective lack of pension saving in employment situations they described as 'temporary'. The inference is that if a situation is viewed as being temporary, there is justification for delaying decision-making and little 'requirement' for the individual to reflect critically upon pensions:

And I think it kind of made me think, well I'm here as a longer-term thing, I need to look at what I'm doing and make some sensible choices. (Interviewee K)

On the other hand, all the female participants who had experience of temporary part-time work due to parenting responsibilities were conscious of the impact

that this would have on their pension. There was some indication (although the sample size is small) that this awareness could also be an impetus for increasing contributions both whilst working part-time and when returning to full-time work:

Because I was conscious that I was working only three days a week as well, and I knew that my earnings weren't very high, there wasn't a massive amount going into my pension, so I needed to put in as much as I could afford at the time. (Interviewee R)

The expectation of salary increases and career progression was important for retirement planning, individually and also, apparently, at a household level. Some participants indicated that the lowest earner in their relationship (usually the woman) was making proportionately lower pension contributions – although this could not be independently verified. Savings strategies appeared to be based on the belief that pension contributions would increase in the future because there was a presumption that participants would be 'earning more, through promotion, but as well from pay rises' (interviewee A) and that there would be surplus income available to allocate to the pension scheme. Most participants expressed confidence that they would be able to develop their careers with their current employer and feelings of being settled enabled them to plan for the future with greater confidence:

There are not going to be these sudden turnaround and cash flow problems and have to lay off however many folk – there is not that sort of culture. (Interviewee D)

### ***Membership norms and the influence of colleagues***

The case study employer voluntarily adopted automatic enrolment and had been automatically enrolling new recruits for several years. Possibly as a consequence, most participants held the view that their employer actively promoted pension scheme membership and this perception reinforced the belief that scheme membership was a recommended course of action. Consequently, automatic enrolment appeared to facilitate the development of pension scheme membership as a norm:

I would say my peers were probably doing the same thing as myself. I don't think I was the exception to the norm. I would say that most people I've worked with have been paying into the company pensions. It's kind of the accepted norm. (Interviewee C)

Interviewee C's assumption about norms adds credence to Duflo and Saez's (2002, 2003) findings that having co-workers participate in retirement savings plans can influence an individual's decision to participate also. Several participants emphasised the role that colleagues played in encouraging scheme membership, and the age that individuals first contributed to the pension scheme appeared to be influenced by the degree of encouragement from more mature colleagues. These elders' role in initiating scheme membership and discouraging opt-out was of particular relevance to those participants who had delayed membership. One individual

spoke of having been physically taken by an older colleague to the pensions department to enrol. Another, when talking about the influence of his older colleagues, noted that he 'joined two years ago more out of being told off by my colleagues' (interviewee Y).

A handful of participants considered it important to act as a mentor for younger employees and to encourage them to engage with the pension scheme. However, the complexity of DC pensions impacted upon older workers' ability to advise younger colleagues on the merits of the pension scheme. Promoting membership of the workplace scheme was not seen as either controversial or complex, but advising younger colleagues about the suitability of contribution rates clearly was:

I wouldn't know what to say to people like, no you should be putting in nine because like, other than the straight arithmetic of nine being bigger than three. I couldn't say what the long-term benefits are going to be. (Interviewee D)

New recruits attended a pension seminar shortly after joining the company and several of the participants referred to this seminar as their main point of information about pensions. There is evidence of at least two participants increasing contributions from 3 to 6 per cent following the induction meeting. Thus, the evidence from this study is consistent with research that points to the correlation between employer-sponsored education programmes and pension saving (Clark, Lusardi and Mitchell 2016; Kaiser and Menkhoff 2016).

In addition to their own financial knowledge, the level of financial planning skills possessed by those in the individual's social network was also of importance. Many of the participants relied on their parents for pension advice; in this way the experiences of those who were near or had reached retirement were being transmitted down the generations. Older colleagues also had an important role to play in transmitting retirement information: there is evidence of participants having been influenced by older members of staff to alter contribution levels and to alter fund selection. One female participant directly linked shifting her contribution from the 3 per cent default to advice that she had received from an older former manager regarding the optimum level of contribution:

My last boss said to me you should always aim for 15 per cent of your salary going into your pension, and that's always just been ringing in my head, so I try and make as much as I can to put in. (Interviewee R)

But the critical point was that this older adviser had passed on the importance of compound interest in DC schemes. This is relevant because individuals were often relying upon pensions advice from older individuals who did not share their experience of contribution-based pensions, having themselves been members of defined benefit schemes. There was also some suggestion that the demographic composition of work teams influenced employees' response to issues around the timing of saving for retirement. Those who were surrounded by younger colleagues had less awareness and interest in saving for retirement.

### **Employer trust and endorsement effects**

The data also suggests that the perception that membership was endorsed was reinforced by high levels of trust at the organisational level. There was evidence that some of the less financially confident individuals trusted that their employer had set the contribution rate at an appropriate level to provide a reasonable, albeit not generous, pension. Moreover, as the quotation below illustrates, even some individuals with experience of higher contribution with previous employers had trusted in the appropriateness of the 3 per cent default rate to meet their own circumstances:

I didn't really consider it, to be honest. Again, because I trusted them, I just thought, if they've decided 3 per cent, there must be a reason for it, it's all good (laughs). (Interviewee K)

Trust in the employer was particularly evident when participants were discussing their choice of investment fund. Several of the female participants expressed doubt about their own financial acumen and, generally, the women displayed greater risk aversion with their DC investments than the men, and believed that those involved in running the pension scheme could be trusted to make investment decisions on employees' behalf:

My kind of view was well if the company have got experts in to make decisions like these for us so why wouldn't I? They are definitely you know, probably more qualified to make the decisions than I am so I just, I took that kind of stance, really. (Interviewee B)

Most participants understood that continuing with the minimum default contribution rate might produce a pension that would be inadequate for their personal circumstances and many had already increased their contributions. However, this proactive behaviour did not extend to fund choice and even most of those who took an active interest in their retirement savings had remained invested in the default fund. There was a presumption that the pension fund managers could be trusted to act in the best interest of the employees:

But I've never sought out too much information on it. I have just assumed they know what they are doing. (Interviewee D)

I suppose we sort of trust they are putting it in the right place. (Interviewee O)

The current research was conducted in the aftermath of a banking crisis and it might be conjectured that the financial climate would have lowered participants' trust in the pensions industry but, contrary to the literature (Foster 2017; Vickerstaff *et al.* 2012), there was little indication that, in the majority of cases, suspicion of the financial sector was restraining contributions. Participants were more likely to express trust in the pension scheme management than to express distrust. The explanation for this apparently incongruous finding most likely lies in the participants' failure to distinguish between their employer and the pension fund

managers. The analysis suggests that some of the participants viewed the investment fund managers and the employer as synonymous. Notice how, in the following quotation in response to the question, 'Do you trust the pension provider?', the interviewee answers with reference to the employer and not to the fund management company:

Yes, absolutely ... I trust [the employer] implicitly. (Interviewee E)

Participants did not always make it clear that they understood the difference between the roles of the pension provider, whose job it is to manage the investments, and their colleagues in Human Resources (HR). Because HR was deemed competent, it was assumed that the pension scheme has been designed to meet the needs of the individual employee and, by extension, that the underlying funds would be well-managed. This endorsement effect appeared to be magnified in circumstances where participants had a high opinion of individual employees who worked in HR:

The guy that manages our pensions [the pensions director], I think he is brilliant. And if he says it's good then I'll go with that. (Interviewee E)

The analysis indicates that implicit endorsement was prevalent and that the participants were more likely to trust in the employer's greater expertise when the decision, such as in investment fund choice, was considered complex. The identification of the health of the pension fund with the financial success of the employer was also apparent. The participants all held their employer in high regard and this primarily derived from the fact that the company offered secure employment and promotion prospects and pay was relatively high. The employer also pays particular attention to the health and safety of its workers and was generally perceived by employees as being a caring employer. The reputational goodwill had spill-over effects on to the perception of how well the pension funds were being managed:

It's such a big company that it would be reputational risk to gamble. I think so, I think that the company is making profits and doing pretty well. That makes you assume the pension will be fine. It could be a false assumption. (Interviewee A)

## Discussion

This study is unusual in pension research in that it has investigated a relatively homogenous socio-economic group of individuals. Of course, retirement savings behaviour may differ across different social groups and the findings should not be generalised to apply to the wider population. Nevertheless, the socio-economic similarity of the participants was one of the strengths of the study – the homogeneity proved to be an effective means of filtering out the noise that a more randomised approach would have generated. In addition, by interviewing employees of a single firm, the study was able to consider how individuals with heterogeneous retirement savings experiences variously respond to similar workplace pension

arrangements. This organisational context in which employees save for retirement is a topic notable for the paucity of dedicated research (Gough and Niza 2011).

The analysis from this research suggests that issues of job security and career progression are of particular relevance to retirement saving. As O'Rand (1996: 235) notes, pension research suffers from a bias that conceptualises careers 'as a relatively sustained sequence of full-time jobs'. Complex and extended transitions into settled employment are usually associated with the disadvantaged and not with the 'choice biographies of the affluent' (Furlong, Cartmel and Biggart 2006: 232), but this paper adds to the debate by drawing attention to the fact that discontinuous career histories and lack of pension saving are not just the preserve of the low-paid or the poorly educated. It is only rarely that the academic debates about flexible working practices and pension provision have paid attention to white-collar workers but the findings from this study suggest that, for this group, temporary contracts delay critical reflection upon pension contribution rates. This is of relevance to the policy debate on 'flexicurity' (Viebrock and Clasen 2009) because a move towards fixed-term contracts, whilst offering advantages for employers, could have long-term detrimental impact on the individual's efforts to save for retirement. The paper adds original insight by demonstrating that, even if employment is not discontinuous, the lack of a permanent contract can also encourage adherence to the pension scheme minimum contribution defaults. One explanation for this may be that the focus upon the transactional nature of employment and upon immediate compensation (Westerman and Sundali 2005) interferes with the process of reflecting upon the suitability of pension contributions.

The government has given some attention to the issues of small (and lost) pension pots and debates generally revolve around the desirability of 'pot following member'. The finding from this study, that a reluctance to acquire small pots inhibits retirement savings, adds impetus to the need to find a solution to the problem. In addition, the suggestion that the non-UK citizens responded more cautiously to commitment to the workplace pension scheme merits deeper investigation. The non-citizen sample in this study was small and this limits the conclusions that can be drawn. However, given the numbers of non-UK citizens living permanently in the UK, research into their retirement savings behaviour is of importance. Clearly there are ethical issues in designing a pensions system that allows insecure workers and the transient the opportunity to opt out, and although one can argue that automatic enrolment has been a 'success', it is incumbent upon policy makers to reflect on whether the freedom of choice inherent in the system is the most appropriate approach to providing income security in old age.

The findings support the view that the employer is influential, whether purposely or not, in directing the savings behaviour of employees. The study points to the relevance of an employer's proactive stance in promoting pension scheme enrolment and facilitating increases in contributions through the provision of financial education seminars. Considering savings behaviour through the lens of social norms, opting for the 6 per cent match rate after a seminar could be a consequence of what Everett *et al.* (2015) refer to as injunctive norms (following a recommended course of action) and descriptive norms (emulating the behaviour of the majority). Everett *et al.* (2015) propose that descriptive norms are of most

relevance to default adherence, and the analysis of the data from this current study provides some support for that hypothesis. Arguably, the cumulative effect of promoting pension savings to new employees led to the establishment of scheme membership norms amongst the majority of the workforce. Only a few researchers have explored the possibility that social norms in the workplace might play a role in determining the extent to which employees participate in occupational pension schemes (Duflo and Saez 2002, 2003). This lack of research may partly be because social norms, which are an abstraction of complex and dynamic interaction, are difficult to conceptualise for quantitative researchers (Xenitidou and Edmonds 2014). Nevertheless, it might be possible to investigate this point by conducting a comparative study of several employers with similar workplace pension schemes but different membership and contribution patterns.

The study has shown that support from older colleagues was influential in encouraging membership and that context-specific advice was helpful in assessing the suitability of contribution and investment fund defaults. Although there is some research into the effects of age diversity in the workplace in relation to employee benefits (Dencker, Joshi and Martocchio 2007), the findings from this current study suggest that this is an area that merits additional research with specific reference to intergenerational knowledge transfer and its impact on financial behaviour.

The conclusions drawn about the gendered differences in saving for retirement are tentative but the distributional weighting of pension contributions within relationships, if substantiated in a larger sample, may go some way to explaining variation in individual pension adequacy. Part-time work clearly impacts on take-home pay and, although some effort was being made by the mothers in this study to increase their savings following return to full-time work, it should be acknowledged that not all women are in the fortunate position of having well-paid employment. Moreover, although participants had similar educational qualifications, the low risk tolerance of some of the females appears to correspond to self-identifying as lacking financial literacy. There are parallels between this conjecture and Hibbert, Lawrence and Prakash's (2013) suggestion that although education levels *per se* do not lower the risk profile of women, financial education does.

The analysis noted high levels of trust in the current employer's ability to manage employees' pension investments on their behalf. Many of the features of the company culture mentioned by participants, such as job security, career progression and concern for employee wellbeing, are believed to directly enhance trust because they signal the organisation's benevolence (Schoorman, Mayer and Davis 2007). In this particular study, it was not always clear whom the individuals were actually trusting: there were a variety of trusting relationships, from immediate working relationships, to trust in HR management, but the analysis suggests that employee-employer interpersonal relationships are relevant in pension planning. However, because of the homogeneity of the research participants, it was not possible to ascertain whether the high level of trust was specific to the participant group or was a company-wide phenomenon. Higher-ranking employees are believed to have greater organisational trust (Searle and Dietz 2012), and it is therefore possible that trust-induced default adherence would not be as significant amongst lower-ranking employees. Trusting behaviour was most evident amongst those with the least self-reported understanding of pensions, suggesting that



there is merit in the approach of Webb *et al.* (2014) of linking pension confusion and employer trust.

The finding that workers may be identifying their retirement savings with the prospects of their employer supports the premise underpinning this paper that, in an automatic enrolment environment, the employment context merits inclusion in the conceptual framework of pension research. The employees' opinion of their employer is important because, although DC pension accounts are individualised, they are generally referred to as Workplace Pensions. Recognising the point that they may be being interpreted as linked to the employer may help explain differences in membership between firms.

The interviewees were purposively selected to be relatively homogenous, facilitating cross-comparison and analysis of how career development influences retirement savings behaviour. Although the homogeneity means that one cannot generalise the findings to the wider population, it may be possible to apply conclusions about similar social groups employed by other large employers. The premise that the employment context is of importance is supported by the testimony of the individual participants as they reflected on their experiences at multiple employers. Although one cannot draw firm conclusions about the current employer's impact on the participants' retirement savings behaviour, one can conjecture that the high level of pension scheme membership amongst the firm's employees (which was significantly higher than the UK average for similar-sized employers) is a consequence of its proactive approach to pension enrolment. Nevertheless, firm evidence of the connection between a single employer and contemporaneous enrolment and savings rates would need to be established in a cross-comparison study.

## Conclusion

The participants under investigation were all well-educated, financially literate individuals on above-median incomes – precisely the type of individual one might suppose is able to secure an adequate retirement income. But, despite their socio-economic similarity, there was considerable variation in the participants' preparedness for retirement. The study draws attention to the point that building assets for retirement is not a discrete event but a cumulative process, and that the task of achieving pension adequacy is complicated by the work experiences of the individuals concerned. It is clear from this study that although possession of a higher income may go some way towards facilitating saving for retirement, increased remuneration is not, by itself, a sufficient assurance of future pension adequacy.

From a policy perspective, the lack of pension preparedness by some of the individuals in this study ought to be of concern. Although the government has turned its attention to the broader issue of pension adequacy, this is not a policy priority and the government sees its role as a facilitator by 'putting in place the right framework to enable people to make better choices' rather than simply prescribing higher savings rates (DWP 2013: 34). The onus is likely to remain upon the individual to ensure that their pension adequately meets their retirement needs. But to be a complete success, pension policy should be designed to meet the needs of *all* employees and, in order to do this, we need to recognise the importance of the context in

which individuals save. It should be acknowledged that the employer plays a role, whether consciously or not, in determining how employees respond to saving for retirement. Although it may be appropriate to present retirement savings as ‘workplace pensions’ to members of DB schemes, the reality is that most private-sector employees are being automatically enrolled into DC schemes. Having introduced automatic enrolment, the government now has a responsibility to ensure these individualised retirement investments can provide the intended objective of income security in retirement for all employees.

## Notes

- 1 Current employer contributions are 1 per cent rising to 3 per cent from April 2019.
- 2 At the time of the study (2013), £27,000 was the median gross annual earnings for full-time employees on adult rates (ONS 2013).

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## References

- Bailey J, Nofsinger J and O’Neill M (2004) 401(K) retirement plan contribution decision factors: the role of social norms. *Journal of Business and Management* 9, 327–344.
- Banks J, Emmerson C, Oldfield Z and Tetlow G (2005) *Prepared for Retirement? The Adequacy and Distribution of Retirement Resources in England*. Institute for Fiscal Studies. Available online at <https://www.ifs.org.uk/publications/3443> (Accessed 2 March 2018).
- Beshears J, Choi JJ, Laibson D and Madrian BC (2007) The impact of employer matching on savings plan participation under automatic enrolment. In Wise DA (ed.), *Research Findings in the Economics of Aging*. Cambridge, Massachusetts: National Bureau of Economic Research, pp. 311–327. Available online at <http://www.nber.org/chapters/c8208> (Accessed 2 March 2018).
- Beshears J, Choi JJ, Laibson D and Madrian BC (2009) The importance of default options for retirement saving outcomes: evidence from the United States. In Brown JR, Liebman JB and Wise DA (eds), *Social Security Policy in a Changing Environment*. Cambridge, Massachusetts: National Bureau of Economic Research, pp. 167–195. Available online at <http://www.nber.org/chapters/c4539> (Accessed 2 March 2018).
- Beshears J, Choi JJ, Laibson D and Madrian BC (2010) *The Limitations of Defaults*. NBER Retirement Research Center Paper NB 10-02, Cambridge, Massachusetts: National Bureau of Economic Research. Available online at <http://www.nber.org/aging/rrc/papers/orrc10-02> (Accessed 2 March 2018).
- Bikhchandani S, Hirshleifer D and Welch I (1992) A theory of fads, fashion, custom, and cultural change as informational cascades. *Journal of Political Economy* 100, 992–1026.
- Bourne T, Shaw A and Butt S (2010) *Individuals’ Attitudes and Likely Reactions to the Workplace Pension Reforms*. London: Department for Work and Pensions. Available online at <https://www.gov.uk/government/publications/individuals-attitudes-and-likely-reactions-to-the-workplace-pension-reforms-2009-rr669> (Accessed 2 March 2018).
- Cialdini R (2008) *Influence: Science and Practice*. Fifth edition, Harlow, UK: Pearson Education.
- Clark GL and Strauss K (2008) Individual pension-related risk propensities: the effects of socio-demographic characteristics and a spousal pension entitlement on risk attitudes. *Ageing & Society* 28, 847–874.

- Clark R, Lusardi A and Mitchell OS** (2016) Employee financial literacy and retirement plan behaviour: a case study. *Economic Inquiry* 55, 248–259.
- Clery E, Humphrey A and Bourne T** (2010) *Attitudes to Pensions: The 2009 Survey*. London: Department for Work and Pensions.
- Dencker JC, Joshi A and Martocchio JJ** (2007) Employee benefits as context for intergenerational conflict. *Human Resource Management Review* 17, 208–220.
- Department for Work and Pensions (DWP)** (2013) *Framework for the Analysis of Future Pension Incomes*. London: Department for Work and Pensions. Available online at <https://www.gov.uk/government/statistics/framework-for-the-analysis-of-future-pension-incomes> (Accessed 2 March 2018).
- Department for Work and Pensions (DWP)** (2014) *Automatic Enrolment: Experiences of Workers Who Have Opted Out – A Qualitative Research Study*. London: Department for Work and Pensions. Available online at <https://www.gov.uk/government/publications/automatic-enrolment-experiences-of-workers-who-have-opted-out-a-qualitative-research-study> (Accessed 2 March 2018).
- Dewilde C** (2012) Life course determinants and incomes in retirement: Belgium and the United Kingdom compared. *Ageing & Society* 32, 587–615.
- Duflo E and Saez E** (2002) Participation and investment decisions in a retirement plan: the influence of colleagues' choices. *Journal of Public Economics* 85, 121–148.
- Duflo E and Saez E** (2003) The role of information and social interactions in retirement plan decisions: evidence from a randomized experiment. *Quarterly Journal of Economics* 118, 815–842.
- Everett JAC, Caviola L, Kahane G, Savulescu J and Faber NS** (2015) Doing good by doing nothing? The role of social norms in explaining default effects in altruistic contexts. *European Journal of Social Psychology* 45, 230–241.
- Foster L** (2012) Using a political economy and life course approach to understand gendered pension provision in the UK. *Sociology Compass* 6, 883–896.
- Foster L** (2017) Young people and attitudes towards pension planning. *Social Policy & Society* 16, 65–80.
- Fudge J and Strauss K** (eds) (2013) *Temporary Work, Agencies, and Unfree Labour: Insecurity in the New World of Work*. Oxford: Routledge.
- Furlong A, Cartmel F and Biggart A** (2006) Choice biographies & transitional linearity: re-conceptualising modern youth transitions. *Revista Papers de Sociologia* 79, 225–239.
- Ginn J and MacIntyre K** (2013) UK pension reforms: is gender still an issue? *Social Policy & Society* 12, 91–103.
- Gough O** (2004) Why do employees, particularly women, reject occupational pension schemes? *Employee Relations* 26, 480–494.
- Gough O and Niza C** (2011) Retirement saving choices: review of the literature and policy implications. *Population Ageing* 4, 97–117.
- Hibbert A, Lawrence ER and Prakash AJ** (2013) Does knowledge of finance mitigate the gender difference in financial risk-aversion? *Global Finance Journal* 24, 140–152.
- Huberman G, Iyengar SS and Jiang W** (2007) Defined contribution pension plans: determinants of participation and contributions rates. *Journal of Financial Services Research* 31, 1–32.
- Kaiser T and Menkhoff L** (2016) Does financial education impact financial behaviour and if so, when? DIW Discussion Paper 1562, Berlin: German Institute for Economic Research.
- Lusardi A, Michaud PC and Mitchell OS** (2011) Optimal financial literacy and saving for retirement. Rand Working Paper 905. Available online at <https://ssrn.com/abstract=1978960> or <http://dx.doi.org/10.2139/ssrn.1978960> (Accessed 2 March 2018).
- Madrian B and Shea D** (2001) The power of suggestion: inertia in 401(k) participation and savings behavior. *Quarterly Journal of Economics* 116, 1149–1187.
- McKenzie C, Liersch M and Finkelstein S** (2006) Recommendations implicit in policy defaults. *Psychological Science* 17, 414–420.
- Meyer T and Bridgen P** (2008) Class, gender and chance: the social division of welfare and occupational pensions in the United Kingdom. *Ageing & Society* 28, 353–381.
- Office for National Statistics (ONS)** (2013) *Annual Survey of Hours and Earnings: 2013 Provisional Results*. London: ONS. Available online at <http://webarchive.nationalarchives.gov.uk/20160105210016/http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2013-provisional-results/stb-ashe-statistical-bulletin-2013.html> (Accessed 2 March 2018).

- Office for National Statistics (ONS)** (2014) *Private Pension Scheme Membership. Pension Trends*. Chapter 7, London: ONS. Available online at <http://webarchive.nationalarchives.gov.uk/20160109100311/http://www.ons.gov.uk/ons/rel/pensions/pension-trends/chapter-7--pension-scheme-membership--2014-edition/art-chapter-7--private-pension-scheme-membership--2014.html?format=print> [Accessed 2 March 2018].
- Office for National Statistics (ONS)** (2017) *Annual Survey of Hours and Earnings Pension Tables, UK: 2016 Provisional and 2015 Revised Results*. London: ONS. Available online at <https://www.ons.gov.uk/releases/annualsurveyofhoursandearningspensiontables2016provisionaland2015revisedresults> (Accessed 2 March 2018).
- O’Rand AM** (1996) The precious and the precocious: understanding cumulative disadvantage and cumulative advantage over the life course. *The Gerontologist* **36**, 230–238.
- Organisation for Economic Co-operation and Development (OECD)** (2013) *OECD/International Network of Financial Education Toolkit to Measure Financial Literacy and Inclusion: Guidance, Core Questionnaire and Supplementary Questions*. Paris: OECD. Available online at [https://www.oecd.org/daf/fin/financial-education/TrustFund2013\\_OECD\\_INFE\\_toolkit\\_to\\_measure\\_fin\\_lit\\_and\\_fin\\_incl.pdf](https://www.oecd.org/daf/fin/financial-education/TrustFund2013_OECD_INFE_toolkit_to_measure_fin_lit_and_fin_incl.pdf) (Accessed 2 March 2018).
- Pensions Commission** (2006) *A New Pension Settlement for the Twenty-first Century. The Second Report of the Pensions Commission*. London: Stationary Office Books.
- Pensions Policy Institute** (2015) *The Pensions Primer: A Guide to the UK Pensions System*. London: Pensions Policy Institute. Available online at <http://www.pensionspolicyinstitute.org.uk/pension-facts/pensions-primer-a-guide-to-the-uk-pensions-system> (Accessed 2 March 2018).
- Pensions Policy Institute** (2016) *How Do Female Lifecourses Affect Income in Retirement?* Briefing Note 84, London: Pensions Policy Institute. Available online at <http://www.pensionspolicyinstitute.org.uk/briefing-notes/briefing-note-84---how-do-female-lifecourses-affect-retirement> (Accessed 2 March 2018).
- Pensions Regulator** (2017) *Automatic Enrolment: Commentary and Analysis: April 2016–March 2017*. Available online at <http://www.thepensionsregulator.gov.uk/docs/automatic-enrolment-commentary-analysis-2017.pdf> (Accessed 2 March 2018).
- Price D** (2007) Closing the gender gap in retirement income. What difference will recent UK pension reforms make? *Journal of Social Policy* **36**, 561–583.
- Robertson-Rose L** (2016) Behavioural responses to automatic enrolment in workplace pension schemes. PhD thesis, Edinburgh, UK: University of Edinburgh.
- Schoorman FD, Mayer RC and Davis JH** (2007) An integrative model of organizational trust: past, present, and future. *Academy of Management Review* **32**, 344–354.
- Searle RH and Dietz G** (2012) Trust and HRM: current insights and future directions. *Human Resource Management Journal* **22**, 333–342.
- Sefton T, Evandrou M and Falkingham J** (2011) Family ties: women’s work and family histories and their association with incomes in later life in the UK. *Journal of Social Policy* **40**, 41–69.
- Smith S** (2006) Persistency of pension contributions in the UK: evidence from the British Household Panel Survey. *Journal of Pension Economics and Finance* **5**, 257–274.
- Strauss K** (2008) Re-engaging with rationality in economic geography: behavioural approaches and the importance of context in decision-making. *Journal of Economic Geography* **8**, 137–156.
- Sunstein CR** (2017) Nudges that fail. *Behavioural Public Policy* **1**, 4–25.
- Thaler RH and Sunstein CR** (2008) *Nudge: Improving Decisions About Health, Wealth and Happiness*. New Haven, Connecticut: Yale University Press.
- Westerman JW and Sundali J** (2005) The transformation of employee pensions in the United States: through the looking glass of organizational behavior. *Journal of Organizational Behavior* **26**, 99–103.
- Vickerstaff S, Macvarnish J, Taylor-Gooby P, Loretto W and Harrison T** (2012) *Trust and Confidence in Pensions: A Literature Review*. London: Department for Work and Pensions.
- Viebrock E and Clasen J** (2009) Flexicurity and welfare reform. *Socio-Economic Review* **7**, 305–331.
- Webb R, Watson D, Ring P and Bryce C** (2014) Pension confusion, uncertainty and trust in Scotland: an empirical analysis. *Journal of Social Policy* **43**, 595–613.
- Xenitidou M and Edmonds B** (2014) The conundrum of social norms. In Xenitidou M and Edmonds B (eds), *The Complexity of Social Norms*. New York: Springer, pp. 1–8.

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