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How can we incentivise pension saving? A behavioural perspective

by Rob Hardcastle

DWP Department for Work and Pensions

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Summary

Introduction

This paper discusses savings incentives from the perspective of behavioural theory. It traces the development of such theory and the application of behaviourally-based policies within the context of the debate over incentives to encourage saving within the UK and elsewhere.

Traditional economic incentives, such as changes in tax relief on saving, assume that saving behaviour will, rationally, change in line with the incentive provided, whereas behavioural incentives take as their starting point the possibility that people do not necessarily behave rationally or as one might expect them to. Such incentives are based on observed attitudes, 'mindsets' and behaviour and seek to channel (or 'nudge') those behaviours towards achievement of more beneficial outcomes to the individual and society.

The development and growing appreciation and use of behaviourally-based initiatives to encourage savings, such as automatic enrolment and Save More Tomorrow, can probably be traced back to a number of reasons: uncertainty and growing dissatisfaction over the impact of more traditional economic incentives; the establishment of behavioural theory, based on empirical observation within academic and policy circles more generally; and the urgency of the issue of under-saving for retirement highlighted by the UK Pensions Commission.

However, what evidence there is of the impact of behavioural measures, mainly from the US, suggests that their success in encouraging saving is by no means guaranteed. It is difficult to say how transferable these results are to different countries and contexts but the strength of such factors as loss avoidance mentalities recorded in various contexts suggest that these might well be relevant to such policies in the UK as a simplified, single tier state pension. Other factors, some structural (such as the pension system, social norms), affective orientations (emotions, trust etc) and the framing and presentation of such measures might however all serve to subvert the intentions of such initiatives.

The recent House of Lords report on behaviour change[1] concluded that non-regulatory measures, including 'nudges', are less likely to be effective if used in isolation, and that effective policies often use a range of interventions. Thus, integrating behavioural and traditional economic measures is probably the best way forward and these in turn, should sit alongside other measures, such as regulation in the range of policies at one's disposal. What this paper also suggests is that this entails integrating these behavioural influences and forms of analysis into traditional models rather than ditching one or the other.

1 House of Lords Select Committee on Science and Technology. Second Report – Behaviour Change (2011).

1 Introduction

This paper aims to describe and discuss issues around encouraging people to save and save more for their retirement, from a behavioural perspective. It looks at actual and potential savings incentives, the impact of incentives and how behaviour might be influenced by policy makers using so-called behavioural techniques such as 'nudge'. While describing the use and impact of such measures, a further objective of the paper is to describe the context in which such measures have gained prominence in policy-makers' thinking in recent years. In so doing, the paper traces the history and development of behavioural measures, and their roots in and connections with more traditional measures such as changes in tax incentives.

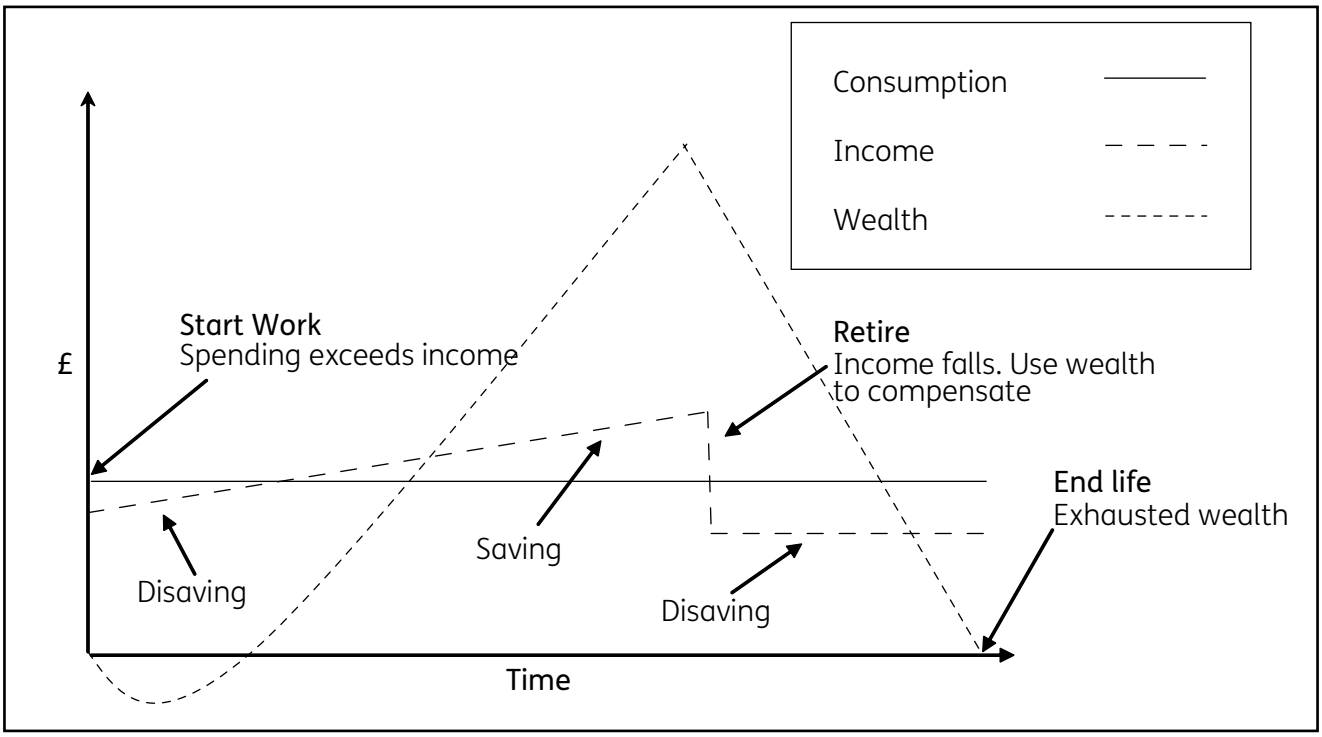
The interaction between incentives and behaviour is complex and is not fully understood. Therefore, the impact on savings of such measures as changes in tax relief is difficult to assess with robustness, and different studies over time and in different countries, and indeed some in the same country, have tended to be contradictory. The focus of this paper is on this interaction; it looks at the theoretical underpinnings of savings behaviour, both traditional economic and more recent 'behavioural'. It highlights what evaluation of the impacts of these incentives has shown and how behavioural measures might influence saving activity. It also looks at issues around the deployment of such measures and concludes that while they constitute a potentially useful alternative or addition to traditional measures they may not necessarily by themselves be a panacea to fundamental and long-standing issues around saving for retirement.

2 Background

Why save for retirement at all? The short answer is that because over a person's lifetime, income and wealth change as people move through their lifecycle and so saving allows one to accumulate wealth to draw on at times when income is lower, such as in retirement. Figure 2.1 presents a highly-simplified representation of these variables. Wealth is accumulated through the individual's working-life in order to fund consumption after retiring. Thus, rational individuals borrow when young, save in middle age, to build wealth, and spend these savings in old age. The underlying savings incentive is, therefore, to be able to enjoy a similar lifestyle in retirement as in one's working life by using saving and wealth to smooth out income over an individual's lifetime.

The smooth lines and curves of Figure 2.1 are of course an abstraction from so-called 'real life'. Life events, such as, in working life, marriage/divorce, having children, house-buying etc and in retirement, such as the need for care in later life make for uneven and sometimes unpredictable income and spending needs. People may respond to this by building up savings wealth systematically, on an ad hoc basis or via a mix of the two approaches. They might also not save at all and finance such events through other means. Savings might comprise a range of assets, including housing wealth, while other means might include borrowing, debt or relying, in retirement, on other potential income sources such as the State Pension, in-retirement state benefits and inheritances. People may also choose to retire sooner or later than they originally planned.

Figure 2.1 Lifecycle theory



Individuals' motives for and means of saving can take many forms, ranging from hoarding (keeping 'liquid' cash for short-term emergencies) to long-term investments, such as a pension for retirement. Besides income, people's savings behaviour (extent and means) will be determined by their attitudes to risk, their financial capability and behavioural influences, i.e. intrinsic psychological attitudes.

With limited incomes and different saving means and motives, different forms of saving can compete or be squeezed in line with people's priorities. Pensions saving is long-term, with a pay-off that is often far in the future for many people, is often illiquid, and although usually relatively risk-free, has suffered in recent years from a perceived loss of trust and confidence mainly as a result of so-called 'pensions scandals'. The growth in 'consumerism', coupled with the advent and growth of potential alternative sources of funding retirement, major changes in the pension system, including the ongoing move from defined benefit to defined contribution schemes, and uncertainties about the State Pension and how people might draw on their pension funds in retirement, or 'decumulation', mean that the traditional route of saving for retirement through a pension has come under pressure in recent years.

Given these factors, people's attitudes and behaviour may be such that they save less for their retirement than is desirable or have what might be misplaced faith in alternative means of funding their retirement, such as housing wealth.

In fact, even before these changes, empirical observation of savings behaviour had tended to contradict traditional economic theories of saving such as the lifetime income smoothing theory (Figure 2.1). As Lusardi states, the evidence is that '*... households do not smooth consumption much over the life cycle ...*'.[2] Econometric analysis also tended to throw doubt on the underlying assumptions about how people behave according to the lifecycle hypothesis.[3] Adapted theories, such as the behavioural lifecycle theory, arose out of these observations and critiques of the traditional theory.

These adaptations to the traditional theory have attempted to model saving behaviour, distinguishing and incorporating 'economic' man (the planner) and 'real' man (the 'doer')[4]. This distinction suggests that people cannot plan over their lifetimes in the way predicted by the lifetime income theories, so instead tend to use judgements and rules of thumb, which tend to be inherited and passed on between individuals and, often, generations. These rules of thumb or norms can become out-of-date and thereby instil inertia in people's behaviour. Observation of people's behaviour also shows a lack of 'self-control' in may cases, with people taking a short-term, myopic view of planning for later life and over-consuming in the short term. And people are susceptible to 'mental accounting', i.e. they adopt differing attitudes and attach differing psychological values to different forms of income and assets.

These so-called behavioural influences have formed the focus of most models that have attempted to explain savings behaviour in recent years.[5] They are also the focus of this paper. Before we look at these influences, it is worthwhile describing savings incentives more generally.

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2 Lusardi (1999).

3 See, for example, White (1978).

4 Shefrin and Thaler, (1988) and others since.

5 See, for example, Laibson (1997 and subsequently).

3 Why do we need savings incentives?

So how might these behavioural theories and models fit with traditional economic and financial incentives to save?; and how might these apparently competing models be reconciled and then used, adapted or supplemented to bring about increased levels of saving for retirement? Before looking at these questions it is perhaps worth just setting the issue of savings incentives in context and trying to define just what is meant by 'savings incentives'.

Analyses of the level of saving in the UK in recent years, both at the micro and macro level[6] suggest a significant degree of undersaving[7] for retirement on the part of individuals and households. This is not a new problem. The issue of undersaving for retirement has been acknowledged and potential solutions debated for some time.[8] What is relatively new is increasing awareness of the phenomenon of the 'ageing population', not least since the Pensions Commission report (in 2004 *et sub*.) and the need to ensure sustainable solutions to the problem of how best to provide for the projected increase in the numbers of people in retirement.

Thus incentives to save for retirement should be seen within this context and as one potential part of the policy response to the ageing population.[9] That the issue has developed perhaps a greater sense of urgency and status in recent years is without doubt and has expedited the search for potential solutions. However, the question of the need to have incentives to try to ensure people save for their retirement has been ever-present and is perhaps symptomatic of the underlying issue that people will, if left to their own devices, tend to undersave.

For traditional economic theory, undersaving for retirement may mostly be because of market imperfections, due perhaps to a lack of information, poor market signals (through, for example, inflexible or inappropriate pricing of potential savings vehicles[10]) and perceived unwarranted risk attached to pensions. From a behavioural perspective, these are important factors but for those advocates of behavioural models the forces that drive behaviour are more likely rooted in individual psychology than the workings of financial markets.

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6 For a macro perspective, see Pomerantz and Weale (2005) and for a micro analysis see the Institute for Fiscal Studies (IFS) analysis of undersaving in the UK (see Annex A of the *2006 Pensions White Paper*).

7 The concept of 'undersaving' begs the question of saving in relation to what? Most analyses base their assessments on a target level such as one that will prove adequate to meet the material needs of the individual or household in retirement. Thus, the IFS analysis was based on the income replacement rates recommended by the Pensions Commission. Note also that the IFS analysis also included people who had no private pension savings, i.e. 'non-savers' from our perspective.

8 See, for example, Mitchell and Fields, (1984).

9 Besides promoting and using savings incentives, there may be other, perhaps complementary policies, such as encouraging people to work longer.

10 Thus, the market prices of savings vehicles, such as equities or bonds may not at a particular point in time reflect their returns relative to their riskiness, as long-term savings investments.

The definition of a 'savings incentive' seems to be fairly fluid. First of all it is useful to distinguish the promotion or use of (positive) incentives to save and the lowering or eradication of (negative) disincentives to save. A change in tax relief might equally be regarded as either depending on the context and the way it is presented/packaged. The former imply some form of active intervention or initiative, by government or employers, say, to promote saving directly while the latter might more usually tend to reflect interventions that impact indirectly on savings attitudes and behaviour.

Thus, incentives may take a myriad of forms. They may:

- be aimed at non-savers and/or existing savers;
- be direct or indirect (using intermediaries to administer and promote, for example, employers, financial institutions);
- originate within government (match schemes[11], tax incentives) or by others (employer contributions, higher interest rates, lower risk, easier access etc.);
- be non-monetary (for example, providing deposit points in banks, or automatic payroll deductions, to make saving easier);
- be targeted (at, say, low-income groups) or across the working population;
- be structural (to elevate savings over a longer period through the ups and downs of the economic cycle) or short term cyclical;
- be costly (perhaps at least to the exchequer) to implement or relatively inexpensive.

This paper looks principally at the range of incentives classed as 'behavioural'. These typically tend to be indirect and aimed ostensibly at reducing disincentives (mainly perceived but some actual). However, behavioural measures can be used and presented ('framed') in such ways that they appear to individuals as positive incentives, so the distinction is not always clear-cut. The range of behavioural measures, used and suggested, to promote saving is large and growing and the forms they take cannot always be typified thus. There is also a growing, but still relatively small, body of evidence on the effectiveness of such measures.

Before looking at behavioural measures and incentives more directly, it is worthwhile describing and tracing their development and growth through looking at evidence on and use of more 'traditional' economic incentives in recent years. This provides context for the discussion of behavioural measures described later in the paper and also helps to draw out some of the main distinguishing features of different incentives.

The use of traditional incentives has often been predicated on the assumption that behaviour will follow 'naturally' from their deployment and that rational, economic people will alter their behaviour in line with changes in the value and nature of the incentives offered. This assumption has been increasingly challenged over the past 20-odd years and the issue of incentives has instead been approached from the angle of looking at existing behaviour and then deploying measures and incentives that are both commensurate with that behaviour and are capable of adapting or changing it.

The next section looks at existing evidence on traditional incentives such as tax relief on savings and describes their deployment in the UK. In so doing it highlights how behavioural perspectives on saving have arisen concurrently as uncertainty over the relative effectiveness and costs of such measures became apparent.

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11 For example, where government matches the individual's contribution to a savings account.

4 Evidence on saving incentives

Evidence on the effectiveness of savings incentives measures is difficult to evaluate with any robustness. This is mainly because it is sometimes not clear at whom the incentive is targeted, it is not easy to predict any 'knock-on' effects or unintended consequences of the incentive and it is often difficult to disentangle the impact of the incentive from other reforms or changes going on at the same time. Evaluation may well also wish to take into account who bears the cost of the incentive, especially the exchequer cost and any distributive impacts of the incentive, so that while effective in terms of increasing aggregate saving, the incentive may simply be too expensive to the exchequer or judged as inequitable.

Another complicating but critical factor to be taken into account is the extent to which incentives give rise to 'new' savings, i.e. savings over and above those that would have been made in the absence of the incentive(s). Thus, allowing tax relief on a particular savings vehicle may increase the level of saving in that vehicle but are people simply shuffling their savings from one vehicle to another?

4.1 Tax incentives

Changing tax regimes or levels is often a favoured means of influencing savings behaviour. Theoretically, increasing the net returns to saving by reducing taxation on capital income may increase private savings. To an economist, the likely net impact of such a measure depends on whether 'substitution effects' (people decide to increase their saving, from consumption, when it becomes more attractive to do so) outweigh 'income effects' (people deciding they have to save proportionately less to achieve a desired future income or wealth). It is generally presumed that substitution effects dominate over the longer run.

At a macro level there is some evidence that reducing taxation on capital income increases savings, but not by very much. Results from one study of 21 Organisation for Economic Co-operation and Development (OECD) countries found that, if the (then) average capital tax rate of 40 per cent were eliminated across the countries, then private saving would only be raised by 0.5 per cent of Gross Domestic Product (GDP)[12]. Other research has suggested that some tax-based incentives, such as Tax Exempt Special Savings Accounts (TESSAs) and Individual Savings Accounts (ISAs) in the UK could have larger impacts but the net result was not a significant increase in 'new' saving[13].

As Disney *et al.* observe '*... it is difficult to target incentives on the marginal saver, so that more generous incentives may actually reduce private retirement saving for the intra-marginal saver through a wealth effect.*'[14] In other words the interplay of the substitution and wealth effects described above may make for a relatively limited overall impact. Those whom policy makers seek to influence, i.e. those not saving or not saving enough may be influenced by tax changes but not necessarily in the way desired. Thus, getting the balance and targeting of savings incentives policies through traditional fiscal and monetary means right is inherently difficult and the impact of incentives is not always easy to predict.

12 Willi, Thornton and Bibbee (OECD, 1997).

13 See, for example, Attanasio, Banks and Wakefield (OECD, 2005).

14 Disney, Emmerson and Wakefield (2010).

With the advent of stakeholder pensions in 2003, the structure of and rules around tax relief on pension saving were changed in order to give 'middle-income earners'[15] an additional incentive to save relative to the arguably more favourable incentives enjoyed by higher earners[16]. Although the measures did not appear to have had a significant impact on the group on which they were targeted, i.e. middle-income earners, later analysis tended to suggest that the tax relief changes did however have some impact on other groups and some sub-groups.[17]

HM Treasury had recognised the need to improve accessibility to saving generally some time ago and the need for incentives for particular groups, especially the less wealthy, and to look beyond purely tax-based incentives.[18] These arguments were reinforced by the findings of the Sandler review, commissioned by HM Treasury, of the medium- and long-term savings market in the UK.[19] The review recognised the potential limitations and inefficiencies of purely tax-based incentives and that the tax system around savings products was too complex for many people. The review particularly noted the issues of value for money of savings and investment products and undersaving amongst less wealthy individuals.

Sandler suggested that while tax relief might shift the pattern of saving, it might not actually increase saving in aggregate. The review recommended a package of measures including changes in tax incentives and making savings vehicles more accessible. The review ascribed the problems it defined to a lack of transparency for savers and advocated better consumer financial education, simpler saving products, simplification of the tax system for savings products and an overhaul of the financial advice market. More recently, the prime advocates of behavioural solutions to problems such as undersaving, Thaler and Sunstein, have highlighted individuals' failure to make 'good use' of tax relief.[20]

The HM Treasury document and Sandler review can thus perhaps be regarded as growing recognition that savings attitudes and behaviour are not conditioned solely by 'economic' variables but also by norms, 'framing' and presentation, financial capability and trust. It was thereby acknowledged that these needed to be taken into account in future savings incentivisation policy.

4.2 Other incentives and 'pays to save'

What this more radical approach to savings incentives also acknowledged was the need for differential, targeted packages of policies to:

- introduce more people to saving. This meant creating new kinds of incentives or at least changing the way the current ones were 'framed', as well as improving financial education; and
- increase the amounts saved by those already saving. This was likely to require more innovative and flexible products.

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15 Defined at the time as those earning between £9,000 and £18,500.

16 Higher earners can claim higher rates of tax relief in line with their higher marginal rates of taxation.

17 Disney *et al*. (2010) estimate statistically significant impacts on the pension coverage of 'low-income earners', i.e. those earning less than £9,000 and women (especially single women). They also estimate that these groups' contributions were higher than they would otherwise have been without stakeholder pensions.

18 HM Treasury (2001).

19 Sandler review (2002).

20 Thaler and Sunstein (2008).

Thus, a range of non-tax based, targeted incentives arose over the following few years, including match saving initiatives ('Savings Gateway'), the Child Trust Fund and extension of ISAs.

As noted, stakeholder pensions, introduced before Sandler, in 2001, had however been designed to make saving for retirement more accessible (a 'behavioural' incentive) and attractive to 'middle-income earners'. They constituted an attempt to change behaviour by increasing coverage, or the incidence, of pension saving.

The introduction of stakeholder pensions does not however appear to have achieved its objectives – take-up and coverage were less than expected amongst its target group, middle-income earners. Nevertheless, stakeholder pensions can in some ways be regarded as a first attempt to take into account how people actually behave in relation to saving, while debate still continues over the effectiveness of traditional tax incentives.[21]

One of Sandler's main proposals was that a system of matching payments, rather than tax incentives might be preferable, especially if targeted on lower- and middle-income groups. In behavioural terms, this would be easier to frame and present to people from such groups than explaining the complexities of the tax system.[22] Although not aimed specifically at pension savings, the proposal to match saving could be regarded as a first step towards getting people to start saving by taking into account their psychological conditioning. In behavioural terms, this is akin to 'goal-setting' in which tangible goals are set, one stage at a time.

Thus, the 'Saving Gateway' scheme, originally proposed in 2001, was piloted between 2002 and 2007 to help people of working age on lower incomes in order to 'kick-start' a savings habit. They were designed to introduce more people to saving, by creating a new incentive (Government matched funding of saving) and improving financial inclusion – 'encouraging people to engage with mainstream financial services.'[23]

Despite some reservations over the administration of the scheme[24], evaluation of the pilot schemes for the Savings Gateway had broadly positive results: between the two pilots undertaken, more than 22,000 people took part, saving an aggregate total of over £15 million, with attitudes 'overwhelmingly positive about the effect of the saving gateway.'[25]

The final evaluation of the scheme found a mixed picture with regard to the net impact on saving: the pilot may well have led to 'new saving' amongst those in lower-income groups[26], while those with higher incomes were found to have been more likely to have switched to the Gateway from other forms of saving.

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21 This is particularly the case in the US where apparently contradictory evidence over the impact of tax incentives has led to ongoing debate (see, for example, Engen *et al*. (1996) and Poterba *et al*.(1998)).

22 Thus, it is probably far easier to say something like 'for every £2 you put into your pension, government will put in £1'.

23 HM Treasury (2008).

24 Mainly over (lack of) interest paid and involvement of the financial sector in the design and running of the scheme.

25 Kempson *et al*. (2005).

26 Although the analysis did not find '*... statistically significant evidence of an increase in overall net worth among this group.*' (HM Treasury/DfES, 2007).

At the same time as these so-called 'Sandler' initiatives were being discussed and implemented, the debate over whether there was actually any long-term financial incentive to save was being rehearsed. This was particularly the case with the arrival and use of pension credits and changes in other means-tested benefits. In effect, in terms of Figure 2.1, why bother saving if income in retirement is going to be 'adequate' without the need to do so?

The context for this debate was the growing realisation that many people would probably not save for their retirement of their own volition. The provision of advice and information to prompt people to save would not be enough on its own. If a major plank of pension policy, automatic enrolment, is to succeed, it could be argued that people need to be reassured beyond doubt that it 'pays to save'.

This is particularly the case as those eligible for automatic enrolment, predominantly people not currently saving through, or without access to, an employer-provided pension, are those with low incomes and likely to be within scope of means-tested benefits in retirement. If these individuals could clearly benefit from saving, then getting the message over to people more generally about the benefits of saving for retirement could be made more easily. The issue of how one counters potential disincentives from means-testing seems almost secondary in comparison.

Analysis of so-called 'pays to save' has shown that for the most part and for most people, saving for retirement does pay.[27] Figure 4.1 shows the sort of modelling and analysis carried out in the run-up to automatic enrolment in the UK. This shows that for every £1 saved, this particular employee can expect a return of around £2, taking into account tax relief, employer contributions and a reasonable assumption about investment growth. Even allowing for different assumptions about those variables on the positive side of the balance or even, as it has been argued, discounting the employer contribution[28], there is still clear positive leeway in terms of net returns.

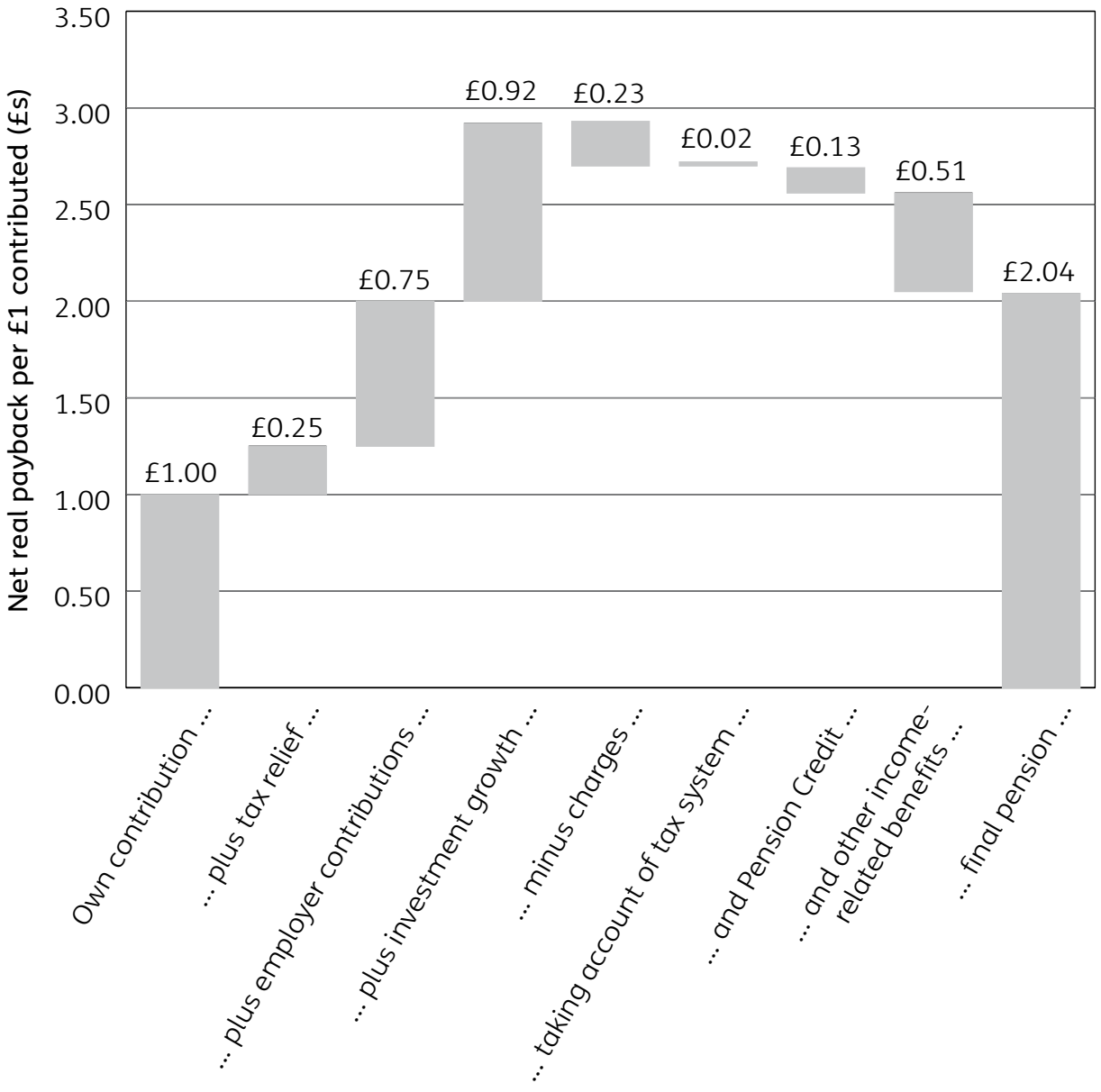
Clearly, this sort of calculation is beyond the cognitive ability of most people, even those with high financial capability. An intimate knowledge of the interaction of in-work- and in-retirement benefits, the impact of investment growth and so on as well as potential changes in policy that might affect these variables are just too complex for even the most financially capable. Even the simplification of the taxation rules around pensions introduced in 2006[29] probably helped only marginally.

27 Although doubt has been cast of late on some of the underpinning assumptions about, for example, rates of return on investments (see, for example, Altmann 2010).

28 On the grounds that employers will eventually claw back their contribution from individuals.

29 The so-called 'A-day' changes.

Figure 4.1 Illustrative payback of saving for pension[30]



Source: Department for Work and Pensions modelling.

30 For a male on 70 per cent of overall median earnings who starts saving (through being automatically enrolled) age 25 in 2012 (from *Making Auto-Enrolment Work* 2010).

It seems debatable whether simply demonstrating that it 'pays to save' will act as a spur to people to start saving or increase their pension contributions.[31] It may act as a reassurance to know that saving is likely to be beneficial but it is important to know what other factors might impinge on the decision and, therefore, just how people might behave even if they knew, or were reassured, that it did pay to save. In other words, is it enough of an incentive to tell people it pays them to put money away for their retirement? The presumption is that they will not do so on their own. These messages about 'pays to save' have been designed to complement and reinforce automatic enrolment and not simply to change people's minds on their own.

Automatic enrolment represents an application of behavioural techniques to increase saving amongst groups and individuals who do not currently save for retirement. However, using people's inertia to promote saving as a policy lever may not be enough on its own to increase saving. What is apparent from the applications of automatic enrolment so far is the need to supplement or 'tweak' it in its most basic form with additional incentives. These are examined in the next section.

The section also looks at other potential behavioural influences on saving and presents evidence on their effectiveness and applicability.

31 Indeed, a recent analysis of the contributions many older employees were making to their 401(k) plans at seven companies (Choi *et al*. 2009) found these to be suboptimal, even in situations in which the employees clearly stood to gain through matched employer contributions. That these employees did not make contributions up to the 'match threshold' was found not to be due to affordability or even a sense that the employees felt they were earning enough to feel comfortable in retirement; it seemed to have more to do with levels of financial literacy and procrastination. Most interesting is the finding that although the same employees thought they should save more, providing them with information about the 'free lunch' they were forgoing failed to raise contribution rates.

5 Behavioural savings incentives

5.1 Automatic enrolment, defaults and behaviour: what is the evidence?

The application of automatic enrolment in the UK should lead to a step-increase in the number of first-time savers because of the sheer numbers of people liable to be in scope of this major policy initiative.[32] Automatic enrolment represents a wholesale change in the 'choice architecture' around saving for retirement, i.e. in the process by which choices around whether to save or not are made. Instead of making an active decision to save, people now have to make an active decision not to save.

If people behave fundamentally as consistently as they did under the previous choice architecture, i.e. not saving due to inertia, they should remain within the savings scheme. But 'automatic enrolment' on its own may not be enough. Most such schemes already implemented have been accompanied by additional incentives. Success is not inevitable even then, as other factors, some cognitive, such as the level of financial capability; some structural and external, such as the economic climate and social norms[33]; and some affective, such as trust in government and employers, and so on will be important.

Evidence from evaluation of automatic enrolment schemes, mainly in the US, suggests that factors that may influence success include:

- the extent and appeal (how it is framed or presented) of any match contribution from the employer and government. This was found to be a factor in the success of individual automatic enrolment initiatives in the US;[34]
- any other associated incentives, such as the ability to withdraw funds early. This was a feature of the New Zealand Kiwisaver scheme introduced nationally in 2007. Kiwisaver also provided other government contributions;[35]

32 As many as 10 to 11 million people.

33 Disney (2006) also suggests that the design of publicly-provided pensions systems (such as the State Pension in the UK) is also closely linked to incentives to save for private pensions. Thus, he suggests, in the case of some countries with benefits closely dependent on contributions, for example, Sweden, that this can serve as an incentive to save but at the same time potentially act as a substitute for private saving. He concludes that the balance of effects will depend on the exact design features of the public programme, preferences, rates of return and so on.

34 See Vanguard (2010).

35 http://www.kiwisaver.govt.nz/new/benefits

- making choices and the 'default' option as simple and straightforward as possible;[36]
- allowing those automatically enrolled as much freedom to procrastinate as possible. People will tend to defer making a decision to opt out if they believe they can always opt out later. They may accept the default given that they have the option to opt out later, although they may never exercise that option. In economic terms, the default allows them to defer incurring the decision-making costs associated with actively making a decision; this tendency to procrastinate is consistent with 'hyperbolic discounting', whereby people tend to over-value the immediate and short-term relative to the medium- and longer-term;[37]
- the extent of inertia or 'status quo bias' amongst those one most wishes to influence. It has been suggested that young people today are less susceptible to such bias, having more desire to control their own economic circumstances and being more questioning of 'authority'; [38]
- delaying the perceived impact of decisions. The longer the delay in realising the impacts of the default decision, the easier it should be to choose the default: thus, the effects of making a decision about increasing pension saving from future income are easier to accommodate mentally than making a decision now that impacts on current income;
- presenting default options that are not only simple but also familiar concepts to people. Thus, 'saving' should be a familiar concept, one that has resonances, but 'pensions', to people who may never have had one, may not be;[39] and
- whether, and the extent to which, there may be prior competing claims on people's incomes. The effectiveness of defaults is hypothesized through 'going with the flow' of people's existing biases and their mental status quo. If, however, people have pre-existing plans, these could serve to act as a competing status quo, undermining the power of the default option.[40]

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36 An evaluation of an attempt to auto-enrol low-income US tax-filers into saving via using ten per cent of their tax refunds to purchase US government savings bonds found that the range of options presented was too wide and unfocused. For practical and legal considerations, people in the treatment group had to have the openly-presented option of purchasing no bonds, or bonds worth more than ten per cent of their refund while, likewise, the control group still had to be presented with the positive option of purchasing savings bonds rather than a default of not purchasing any. See Bronchetti *et al*.(2011).

37 The US tax-filers study found that the default, of automatic enrolment into purchasing savings bonds, was less popular as there was less scope for procrastination than 401(k.) users would normally be allowed. Most of the latter would have the ability to opt out at any time by making a single phone call, while in savings bond example individuals were making a one-time decision to save some of their refund with no explicit opportunity to change their mind later. The decision was in fact binding for that year's refund and not for refunds in later years.

38 See Berry (2011).

39 The authors of the same US evaluation felt that low-income tax filers might have shied away from saving in bonds because of their relative unfamiliarity and discomfort with the idea of purchasing savings bonds, relative to other forms of saving.

40 In the case of the US tax-filers evaluation, the authors found that the tax refunds had been mentally ear-marked for consumption or to pay off debts and bills. These intentions ('mental accounting') overrode other potential in-built behavioural benefits and incentives the default offered. Interestingly, this mental treatment of the windfall tax rebate contrasts with the accepted 'behavioural wisdom' that windfalls tend to be regarded as additions to wealth and not regarded as present income for consumption (see Shefrin and Thaler (1988)).

Besides these considerations, participation will depend on the financial capability and level of engagement with the decision, and trust in the government and the individual employer on the part of those automatically enrolled.

Some research in the US has also compared different forms of defaults and enrolment decision-making processes in the context of enrolment in 401(k) plans.[41] These defaults/processes range across the spectrum from 'standard enrolment', whereby employees are by default not enrolled and can choose to opt into a pension plan; to 'active decision', whereby employees are compelled to make a decision about enrolment one way or the other within a fixed time; to automatic enrolment, whereby employees are by default enrolled and can choose to opt out.

This research suggests that the 'active decision' approach increases participation and savings rates relative to the standard enrolment default, and is socially optimal when employees have a strong propensity to procrastinate and 'relatively heterogeneous savings preferences'.[42] However, default (automatic) enrolment is better when employees suffer from low levels of financial capability.

What is clear from this body of evidence is that transferring the experience of automatic enrolment from one setting to another may not always be possible. As the authors of the US tax-filers evaluation report:

> *'Further research is needed to assess the power of defaults for different populations, and to open the black box of the mechanisms behind default effects.'*

What is also not clear is the impact of incentives under automatic enrolment. In the UK context, the effects that a combination of an employee contribution with tax relief will play in people's participation decisions are difficult to predict. The complexity of the tax system has already been remarked upon and this may in itself be a deterrent to understanding and taking up incentives that already exist.

What is important, therefore, is gaining an understanding of behaviours (psychological factors) and how they interact with financial incentives such as tax benefits. As a recent review put it:

> *'There is relatively little compelling evidence on the interworking of perceptions of saving and on actual savings behaviour, and even where there is evidence, it reveals contradictions.'* [43]

Attempts to integrate 'behaviour', or psychological factors, into traditional econometric models are growing in number but still relatively scare. The National Institute Benefit And Tax (NIBAX) model developed for DWP by the National Institute for Economic and Social Research to explore behavioural responses to policy change constitutes such an attempt and is discussed in Section 6.

Some modelling in the US has attempted to look at the relative influence of behavioural, psychological variables but these are relatively ad hoc, taking advantage of data or experiments with particular measures over particular periods or in particular circumstances. However, they do, taken together, amount to a significant body of evidence of the potential impact of such factors generally, and are not peculiar to such periods or circumstances.

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41 Carroll *et al*. (2009). This research was based on empirical observation of employees' behaviour in a large Fortune 500 company in the financial services sector and subsequent modelling of the social welfare impacts of these various defaults/processes under various assumptions and conditions.

42 In effect, a workforce with a wide range of savings motivations.

43 Wicks and Horack (2009).

As an example of such an analysis, a recent study of the take-up and levels of contributions to Individual Retirement Accounts (IRAs) in the early 1980s[44] found that psychological factors carried significant weight in explaining the take-up of and saving in IRAs during that period.[45]

The variables found to be most important were those that proxied attitudes to loss avoidance, whereby people's saving behaviour differs when faced with the prospect of losing a tax benefit than gaining one; and framing effects, in which people's reactions to tax gains or losses in one period changed according to the level of the loss/gain in the previous, i.e. an 'adaptive expectations' approach.[46]

Actual levels of investment income were then compared with modelled levels of investment income as if no IRA contributions were made, to try to estimate whether the contributions were simply trying to take advantage of more beneficial tax allowances rather than constituting net new saving.

The findings gave support to the presence of loss avoidance factors on saving in IRAs. It also found in favour of an 'adaptive expectations' approach and perhaps most important, in favour of the proposition that the then tax relief regime in place did lead to net new savings, and mainly from new savers.

The author of the study concluded that although the main influences on IRA participation were actually existing savings propensity and previous IRA participation, the availability of IRAs as a contemporaneous, 'upfront' vehicle to defray or use tax deficits/gains had a net positive impact on aggregate saving. He concludes that such psychological structural framing effects offer policy makers potentially less costly features to incorporate in the design of savings incentives than, say, tax subsidies.

Another US study found that supplemental, non-mandatory, pension contributions made by university faculty members varied substantially depending on whether the contributions were presented as salary deductions or as supplementing employer contributions.[47] This analysis, therefore, finds evidence, in this particular context, for framing effects and the presence of 'mental accounting'.[48]

These studies highlight the need not to attempt to divorce mentally traditional economic and behavioural thinking but rather to try to integrate systematically and consistently behavioural factors into analytical frameworks in order to judge the effectiveness and impact of incentives policies. That such models seem to be relatively few in number suggests that this is no easy task methodologically – most analyses appear to have taken advantage of 'one-off' particular circumstances and to some extent present inconsistent findings – but also that the growing body of evidence they constitute suggests it is important to do so.

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44 Enis (2006).

45 At that time, all taxpayers could contribute immediately into IRAs up to the lower of $2,000 or the amount of his/her earned income to offset the income used to calculate tax liabilities by the Internal Revenue Service (IRS). After 1986, the full deductibility of contributions to traditional IRAs was restricted to those that are not active participants in qualified pension plans and deductions for others were phased out. Contributing actually conferred no net tax advantage as all investment gains from the IRA were taxed as ordinary income at the same time.

46 Thus, a lower tax refund in period 2 relative to period 1 will be treated as a loss mentally by many people.

47 Card and Ransom (2011).

48 Thus, it appears that faculty members 'compartmentalised' the sources of their contributions, i.e. their salary and the employer's contributions.

5.2 Increasing saving to meet future needs and aspirations – addressing savings adequacy

There are several further issues arising from a consideration of the impact of automatic enrolment on saving. These include the adequacy of the pension saving brought about; and what can be done to engender further saving amongst those not directly affected by automatic enrolment, i.e. those already with some form of private provision.

For those affected by automatic enrolment, to what extent will the reform guide participants towards a retirement income that will meet their pension expectations? Will the aggregate minimum contribution rate of eight per cent[49] be enough to meet most people's aspirations for retirement income? And for those not within scope of automatic enrolment, how can we be sure they will have enough, not just to get by on but to afford them a comfortable standard of living?

Inertia and framing effects[50] may lead to people, once enrolled, disengaging from active decision-making about their pensions. Alternatively, those who may have enrolled voluntarily save at a lower contribution rate than they would otherwise have done.[51] Indeed, even those not within scope of automatic enrolment may take its introduction as a signal to change their behaviour and, *in extremis*, reduce their contributions. A recent DWP-sponsored survey of people's ability to predict their income in retirement concluded that:

> *'... having an occupational pension was often perceived as being sufficient for providing for ... retirement, without taking into account what it was likely to generate.'*[52]

Indeed, this notion, of simply having a pension as being enough in itself to provide an adequate income in retirement seems to have been (and still is) a social norm passed on to current generations. The risk attached to such a norm may well have been less in the days of employer-provided defined benefit (DB) schemes but is now more pronounced as defined contribution (DC) schemes supersede these. There is more of need to monitor and adjust pension contributions, and to actively manage retirement planning, than previously. Simply relying on inertia, therefore, has its dangers.

A potential consideration in this regard might, therefore, eventually be the combination of automatic enrolment with automatic escalation, i.e. an automatically administered gradual increase in employee contributions over time, usually in line with wage increases. Such mechanisms are being implemented by an increasing number of employer-sponsored schemes in the US and have their most obvious manifestation in the 'Save More Tomorrow' initiative in the US.[53]

Save More Tomorrow (or SMarT) was found to increase savings incidence[54] and intensity, i.e. not only did it increase the numbers of people saving but the amounts saved (as proportions of incomes) increased relative to other comparable initiatives. Why? Thaler and Benartzi attribute this to the contractual, prescriptive nature of SMarT. Psychological traits such as procrastination and a lack of self-control are countered by committing people contractually to increasing their savings rates in line with their wages and salaries over time.

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49 This includes the agreed minimum employer contribution of three per cent and the tax relief provided by Government, of one per cent.

50 People may well regard the form that automatic enrolment takes almost as a form of government advice, so that they do not seek to deviate from it.

51 See Choi *et al*. (2002).

52 Kotecha *et al*. (2010).

53 See Thaler and Benartzi (2004).

54 Mainly through experiencing lower attrition, or drop-out, rates relative to other initiatives.

These psychological traits have been analysed and modelled formally within the concept of 'hyperbolic discounting', whereby people, through these characteristics, reveal divergent, inconsistent discount rates with respect to income and expenditure in the short term as opposed to medium to longer term. When the medium or longer term eventually arrives and becomes the 'short term', the original psychological traits and preferences expressed revert to those the individual applies to the short term. In other words, the individual suffers from myopia and tends to favour short-term gratification to saving for future needs.

Counters to such attitudes and behaviour like SMarT can on one level be regarded as tackling a disincentive to saving such as the desire for short-term consumption, rather than serving as a positive incentive to encourage saving. On another however, they serve, in psychological terms, as a positive incentive in that they seek to defer the salary sacrifice associated with contributing to a savings account or pension in the short term.

This issue of positive deferment of saving, thereby incurring loss avoidance of current salary, highlights the importance of the framing of messages and policies around saving for retirement.[55] Behavioural theory indeed suggests framing messages in terms of 'loss avoidance' carries with it greater resonance than highlighting the positive gains to be made from saving.[56]

As we have seen in Section 5.1, the framing of messages and perceptions of gains and losses is important: with adaptive expectations, an actual gain can be perceived as a loss and behaviour can thereby differ from what one might anticipate. This is a potentially powerful psychology to counter but expectations can be managed if the right tools and communications are deployed correctly in the right circumstances and taking into account the context in which the incentive is used.

5.3 Improving saving amongst those not affected by automatic enrolment – changing the 'choice architecture'

These behavioural issues apply just as much to people not directly affected by automatic enrolment. Indeed, as noted, it is possible that those not directly affected take the introduction, rules and framing around automatic enrolment as signals to change their own saving behaviour. Notwithstanding whether or not this might be the case, increasing the level and consistency of saving amongst the majority of people are still important issues.

Behavioural polices are designed typically to frame (or re-frame) messages and to incorporate behavioural principles into incentive structures or systems. This usually referred to as changing the 'choice architecture'. There is a need to take account of differences between individuals (traits, characteristics, circumstances and 'foibles') but also the actual and potential influence of other factors, including the potential structural, external and affective influences described above.

Between individuals, not only are circumstances and characteristics different but also cognitive ability (financial capability), levels of self-awareness and of external influences and susceptibility to behavioural changes. That individuals suffer not only from different levels of, say, myopia, but also from apparently inconsistent attitudes and behaviours as well as differing levels of self-awareness of

55 See also the proposal 'Spend More Today', which deploys similar behavioural concepts to frame messages to encourage people to plan their spending through their retirement (Blake and Boardman 2010).

56 The concept of loss avoidance first arose in the 'prospect theory' work of Kahneman and Tversky (1979).

such attitudes and behaviour[57] has become clear through empirical observation of saving behaviour and qualitative economic, psychological and social research.

Thus, individuals can hold positive attitudes to saving existing alongside '*... concern about the sacrifices associated with abstaining from consumption.*'[58] Likewise, recent research on saving amongst low-income families in the UK with little accumulated savings still found positive attitudes to saving.[59]

Others have found that saving is regarded as a virtuous act, one that earns respect from peers, and can, therefore, be regarded as a social norm[60] but maybe not a norm that is dominant and is susceptible to behavioural and structural influences.[61] Norms tend to have an emotional resonance whereas behavioural theory talks about the 'herding' instinct of people in which people simply tend to follow the behaviour of their peers or co-workers.[62] Differences may be subtle and complex. However, the 'bottom line' for empirical assessment of savings behaviour is that intentions to save, however much founded on emotion and goodwill, may not be translated into actions.[63]

The issue of a divergence in attitudes and actions can be attributed to behavioural factors such as myopia and procrastination whereby individuals behave as if they lack self-control.[64] Addressing these behavioural characteristics is not straightforward but key seems to be changing the 'choice architecture' to use these characteristics to channel or restrict the freedom to abstain or withdraw from saving. This could take the form of a contract between the government (or employer) to increase saving, as in SMarT, or, say, providing positive incentives, such as tax relief on saving but only for a limited period, i.e. a 'carrot and stick' approach that offers incentives whilst acknowledging behavioural tendencies.[65]

There is an issue here over the extent to which the choice architecture should be adapted to accommodate people's existing tendencies.[66] Attempts to accommodate behavioural tendencies such as 'mental accounting', (whereby people treat different sources of income and wealth

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57 Laibson and others have postulated that people are aware of their tendencies in many instances and adjust their behaviour to compensate. Thus, people do save in illiquid assets such as pensions, that serve as 'commitment devices' that allay their temptation to binge in the short term.

58 Warneryd (1996).

59 Dolphin (2009).

60 Attitudes to work and saving may be different between societies, and perhaps even seen almost as a duty, as in Japan for example (see Lloyds TSB International (2009)).

61 Lindbeck (1997) describes the social norm in favour of saving as referring to '*..a virtue that many people are not able to live up to.*'

62 Orszag (2008) and more recently, Behaghel and Blau (2010)have explored the influence of herding and framing effects on decisions over the ages at which people retire in the US.

63 Much of the psychological literature refers to this phenomenon as 'cognitive dissonance', in which intentions and statements to intend to act, are not translated into actual deeds.

64 See Choi *et al*. (2002).

65 ISAs in the UK have some of these restricting features.

66 Thaler and Sunstein (2008) make the distinction between measures to address a golfer's swing that try to compensate for the swing, for example, if one slices the ball, aim left to start with and those that address the problem head-on, i.e. stand or address the ball differently.

differently[67]) might focus on the incentive of a lump sum payment rather than regular but smaller payments. Likewise, bringing forward the actual and perceived benefits of saving, for example, early access to pensions saving, might encourage the take-up of saving schemes.

This 'bending' of the architecture might carry with it the risk of accusation of complicity in almost encouraging existing behaviours, or sending the wrong signals or of having a greater likelihood of unintended consequences. The perceived benefits of such incentives need to be weighed against the potential costs and against the benefits and costs of other potential measures such as direct intervention.

5.4 Promoting savings behaviourally – simplification and 'rules of thumb'

As noted in Section 4.2, the benefits of saving for retirement are not always immediately obvious. This makes planning and saving for retirement potentially fraught with difficulties especially if people have some idea of the income and standard of living they wish to achieve in retirement.[68] Given the complex nature of some incentives and barriers to saving, especially around the tax and benefits system, it seems hardly surprising that people shy away from assessing costs and benefits or behaving as planners might wish.

Behavioural theory postulates that in making potentially complex decisions individuals rely on heuristics (or 'rules of thumb'). Decisions around planning and saving for retirement are becoming more complex as employers and individuals shift from defined benefit to defined contribution pension schemes. Individuals' levels of financial capability might well determine the nature and complexity of the heuristics adopted and patterns of saving.[69] It may also be the case that individuals' decision-making is most vulnerable during the transition to defined contribution systems.[70]

In behavioural terms any rules of thumb that serve to reduce the complexity of the decisions and choices faced by people is seen as a benefit. The more the rules are founded on empirical observation of people's attitudes, circumstances and characteristics (including their financial capability) so much the better.

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67 For example, people may tend to save more of an income from equity dividends than from salaries.

68 Recent DWP research (Kotecha *et al*. 2010) found that few people were confident about making predictions of their income in retirement. The main reason respondents found it difficult is that they perceive there to be (and in fact there are) a large number of unknown factors, all of which may impact on their ability to contribute or save in a pension leading up to retirement. There is also uncertainty about what age they will retire, whether they will have a spouse or partner at that stage, and what impact market fluctuations will have on the performance of their pension fund. On top of this, pension information was not felt to be as clear or as helpful as it could be in terms of making decisions about planning and saving for the future.

69 See Lusardi (2008).

70 This is because individuals under defined benefit have tended to rely on government and employers and not improved or maintained their levels of financial literacy. Jappelli (2009) found an inverse relationship between the generosity of public pension systems and levels of financial literacy across 55 countries studied.

The DWP research on predictions of income in retirement found that the rules of thumb adopted by some respondents varied in their levels of sophistication. The approach was underpinned by a reference point, but had little empirical data to support the estimates people made. Three different methods emerged from the research: comparisons to their current earnings, comparing their own position relative to others and/or projecting forward a current income stream.

The rules of thumb adopted were not, therefore, based on projections or predictions ahead to an end-state or objective but simply on people's current situations. These were used as a yardstick by which to measure their future situation – to use the language of behavioural economics, people had strong reference dependency, with the main reference being their current financial position. This reference may well also constitute a form of inertia, in that people feel they are going to get much less to live on in retirement than they currently have so tend to avoid thinking about retirement planning matters. This tendency to use rules of thumb based on current income or financial situation may also well reflect lack of knowledge, certainty about or trust in their potential retirement income sources, and 'short-termism' exacerbated by an unwillingness to engage with an uncertain financial and economic future.

The effects of the introduction of the single tier pension, a simplification of the State Pension system, will be interesting to evaluate. On the one hand, the setting of the level of the single-tier pension has to take into account potential wealth effects whereby people feel they have to save less privately if they know the value of the State Pension will be higher and guaranteed.

On the other hand, the main focus of the single-tier, and the main savings incentive, will be to reduce the complexity of the decision to save for the future. All things being equal, a simpler system should engender a higher level of cognitive trust[71] in a simplified pension system. Thus as Ring (2005) notes:

> *'If a base line of economic security in retirement is guaranteed through the State Pension then people may be more willing to save more of their income for retirement because the 'heat' has been taken out of the planning.'*

As however already noted, it is imperative, in promoting behavioural incentives, to take account of the context and circumstances in which the incentive is deployed. Thus, with single tier, while one may wish to promote it in behavioural terms as a vehicle to provide a minimum level of financial security upon retirement, and thereby as the foundation for private pension saving, many people may also fear losing other future means-tested benefits if they do save more in the meantime. Indeed, as discussed in previous sections, there is a growing and persuasive body of evidence that loss avoidance is a powerful behavioural trait of many people.

What seems key to single tier in behavioural terms is to shift the focus of attention away from the 'pays to save' debate inherent in the financial calculations of potential losses of future means-tested benefits vs. the future potential benefits of saving more now, as arguably, people's inclinations to avoid losing benefits will count heavily against saving. Perhaps promoting single-tier as a replacement for such benefits, and moreover, one that is guaranteed no matter what level of saving the individual decides to undertake, might be one way forward. This will be potentially difficult given the potential power of loss avoidance psychologies and such a message may take some time to gain traction.

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71 In effect trust based on rational judgement rather than emotions or 'gut feelings'.

6 Modelling saving behaviour

Behaviour around saving is complex. Not only are the psychological tendencies apparent from the growing numbers of studies of relevance but how these are translated into actual behaviour depends on a whole range of factors, not just behavioural. Behaviour is also conditioned by whether and the extent to which individuals are actually aware of their own tendencies (or 'foibles') and attempt to adjust accordingly. Given these considerations, how does one go about modelling savings behaviour?

Whether individuals save more or less in response to new policies depends on income and substitution effects. If households are made worse off by a reform the relative cost of leisure will fall because the opportunity cost of leisure is the (post tax) wage received from work. As leisure becomes cheaper households could substitute leisure for work so work less and save less (substitution effect). However, the opposite impact is the 'income' effect as households become worse off this will tempt some to work more and save more to make up for what they have lost. We would normally expect the income effect to be stronger for households on higher incomes. Modelling these potential twin effects across a varied population within a complex tax and benefit system is difficult. Taking into account potential behaviour that does not necessarily assume economic rationality, such as framing effects, is a further complexity.

NIBAX model was developed by the National Institute for Economic and Social Research to explore behavioural responses to policy change. It is a lifecycle model built around rational expectations, i.e. that people behave as predicted by traditional economic theory. In the model, individuals are assumed to maximise lifetime utility between income and wealth and, therefore, make decisions about work/leisure and saving/consumption based on an understanding of the prevailing tax and benefit environment. However, individuals may not be rational as assumed and it may take time for them to change their behaviour so the results of the model should be regarded as characterising how behaviour will change in the long run in reaction to changes to incentives. More recently myopia (short sightedness) on the part of individuals has been added to the model. How best to model other types of behaviour and psychologies is being considered.

DWP has carried out its own analysis using the NIBAX model. The model suggested that raising the state pension age lowered retirement saving for the top 60 per cent of the income distribution, but increased it for the bottom 40 per cent. Higher income groups save less because, assuming life expectancy remained unchanged they anticipated a shorter retirement. The rise in pension saving for the lowest income groups is best explained by this group's reliance on the state pension and other income-related benefits. Those lower down the income distribution must save more to compensate for the loss of state benefits that they would otherwise receive at age 65.

NIBAX has also been used to look at the effects of a number of policy scenarios. For example, the model was used to assess the impact of reducing the base rate of tax from 22 per cent to 20 per cent and the abolition of the 10p starting tax rate which were announced in the 2007 budget. The results suggested that individuals on low incomes would reduce pension saving slightly and individuals on high incomes increase theirs a little. Incentives to contribute to a pension vary in a complex manner over the income distribution. At the lowest incomes incentives interact with welfare payments so as incomes rise above the level of means tested benefits incentives to save

for retirement get stronger.[72] Myopia tends to lower labour supply early in life, increase the use of unsecured debt and delay retirement saving.[73]

NIBAX represents an advance in the integrated modelling of traditional economic utility-based behaviour of individuals but this is at a relatively rudimentary level at the moment. More work is needed to understand prevalent behaviours and psychologies, across various economic and social segments and refine the model accordingly.

72 Van De Ven and Weale (2009).

73 Van De Ven and Weale (2010).

7 Conclusions and policy implications

7.1 Why focus on savings behaviour?

People's attitudes and behaviour may be such that they save less for their retirement than is desirable or have what might be misplaced faith in alternative means of funding their retirement, such as housing wealth. Actual savings behaviour also tends not to reflect broadly positive attitudes towards saving revealed in social surveys.

Empirical observation of savings behaviour had tended to contradict traditional economic theories of saving such as the lifetime income smoothing theory, whereby people save at times of increasing income and wealth in order to provide for themselves at times of declining income and wealth. As Lusardi states, the evidence is that '*... households do not smooth consumption much over the life cycle ...*'.[74] Econometric analysis has also tended to throw doubt on the underlying assumptions about how people behave according to the lifecycle hypothesis.[75] Adapted theories, such as the behavioural lifecycle theory, arose out of these observations and critiques of the traditional theory.

Analyses of the level of saving in the UK in recent years, both at the macro, or aggregate, and micro, or individual, level[76] suggest a significant degree of undersaving for retirement on the part of individuals and households.[77] This is not a new problem. The issue of undersaving for retirement has been acknowledged and potential solutions debated for some time.[78] What is relatively new is increasing awareness of the phenomenon of the 'ageing population', not the least since the Pensions Commission reports (in 2004 *et sub*.) and the increasing urgency of the need to ensure sustainable solutions to the problem of how best to provide for the projected increase in the numbers of people in retirement.

Behavioural influences have formed the focus of most theories and models that have attempted to explain savings behaviour in recent years.[79] These have focused on psychological factors that may influence savings decisions, including how incentives are presented. As noted, this growth in such analysis in part reflects empirical observation of savings behaviour but also uncertainty over the impact of so-called traditional economic measures such as tax relief on savings.

Policy makers in the UK have also over the past 10-15 years recognised the need to make saving accessible and incentives less complex. The context for such changes was increasing uncertainty over the effectiveness and impact of traditional incentives, such as varying levels of tax relief and

74 Lusardi (1999).

75 See, for example, White (1978).

76 For a macro perspective, see Pomerantz, O. and Weale, M. (2005) and for a micro analysis see DWP (2006).

77 This issue is not restricted to the UK. It is estimated that only about half of all workers in the US participate in any type of employer-provided pension plan.

78 See, for example, Mitchell and Fields(1984).

79 See, for example, Laibson, D. (1997).

the growing acceptance of the need to engage more directly with those on medium and lower incomes – see the HM Treasury review of savings incentives and Sandler review of savings markets in the early 2000s.[80]

These reviews can also perhaps be regarded as growing recognition that savings attitudes and behaviour are not conditioned solely by 'economic' variables, with which individuals find it difficult to understand and engage with, but also by norms, 'framing' and presentation, financial capability and trust. It was thereby acknowledged that these needed to be taken into account in future savings incentivisation policy.

7.2 Evidence on the impact of behavioural factors on saving

There is a growing body of evidence that providing people with information and guidance on saving and the need to save, especially for a long-term investment such as a pension, will not be enough on its own. This was recognised by the Pensions Commission. Having said that, if it can be shown that it pays to save, and for whom, then this can form the basis of a structured, targeted campaign to influence attitudes and behaviour. What seems key is an understanding of what influences particular individuals and groups with relation to saving and other financial decision-making.

It seems debatable whether simply demonstrating that it 'pays to save' on its own, and no matter how well-presented, will act as a spur to people to start saving or increase their pension contributions. It may act as a reassurance to know that saving is likely to be beneficial but it is important to know what other factors might impinge on the decision and, therefore, just how people might behave even if they knew, or were reassured, that it did pay to save.

Making saving easier and more accessible has been the main means behind attempts to influence savings behaviour in the past few years, especially amongst medium- and low-income groups. That these groups still do not appear to be saving enough may say something about the incentives offered but equally, it may say more about the competing financial pressures and contexts in which people live. Positive attitudes to saving are apparent, even amongst such groups, but immediate pressures tend to hold sway.

Even amongst those with fewer financial pressures and who may well be saving into a pension, prevailing social norms can have a strong influence. Thus, research has found that many people regard simply having a pension as being enough in itself. This seems to have been, and to still be, a social norm passed on to current generations.[81] That it may or may not be enough to provide an adequate income in retirement is a secondary issue in many people's minds. The risk attached to such a norm may well have been less in the days of employer-provided defined benefit (DB) schemes but is now more pronounced as defined contribution (DC) schemes supersede these. There is more need on the part of individuals to monitor and adjust pension contributions, and to actively manage retirement planning, than previously.

Measures to tackle undersaving include automatic enrolment. The rationale behind such an intervention is that people cannot be relied upon to save adequately for retirement so should be enrolled into workplace pension schemes, with the onus on the individual to opt out if they so wish.

80 HM Treasury (April 2001) and HM Treasury (July 2002).

81 See, for example, Kotecha, M. *et al*. (2010).

7.3 Automatic enrolment, defaults and behaviour

Automatic enrolment, therefore, represents a wholesale change in the 'choice architecture' around saving for retirement, i.e. in the process by which choices around whether to save or not are made. Instead of making an active decision to save, people now have to make an active decision not to save.

If we assume that people behave fundamentally as consistently as they did under the previous choice architecture, i.e. not saving due to inertia, they should remain within the savings scheme. But if the prevailing social norm is to simply have a pension, regardless of the level of contributions or the pension's end-value, reliance on inertia has its risks later in that once enrolled, people may disengage from further active decision-making about their pension and saving.

Indeed, what evidence there is suggests automatic enrolment on its own may not be enough to increase aggregate saving. Most such schemes already implemented, mainly in the US, have been accompanied by additional incentives. Success is not inevitable even then, as other factors, some cognitive, such as the level of financial capability; some structural and external, such as the economic climate and social norms; and some affective, such as trust in government and employers, and so on will be important.

Evidence from evaluation of automatic enrolment schemes, mainly in the US, suggests that factors that may influence success include:

- the extent and appeal (how it is framed or presented) of any match contribution from the employer and government. This was found to be a factor in the success of individual automatic enrolment initiatives in the US;[82]
- any other associated incentives, such as the ability to withdraw funds early. This was a feature of the New Zealand Kiwisaver scheme introduced nationally in 2007. Kiwisaver also provided other government contributions;[83]
- making choices and the 'default' option as simple and straightforward as possible;[84]
- allowing those automatically enrolled as much freedom to procrastinate as possible. People will tend to defer making a decision to opt out if they believe they can always opt out later. They may accept the default given that they have the option to opt out later, although they may never exercise that option;[85]

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82 The Vanguard Group (2010).

83 www.kiwisaver.govt.nz/new/benefits

84 An evaluation of an attempt to automatically enrol low-income US tax-filers into saving via using ten per cent of their tax refunds to purchase US government savings bonds found that the range of options presented was too wide and unfocused. For practical and legal considerations, people in the treatment group had to have the openly-presented option of purchasing no bonds, or bonds worth more than ten per cent of their refund while, likewise, the control group still had to be presented with the positive option of purchasing savings bonds rather than a default of not purchasing any. See Bronchetti *et al*. (2011).

85 The US tax-filers study found that the default, of automatic enrolment into purchasing savings bonds, was less popular as there was less scope for procrastination than 401k. users would normally be allowed. Most of the latter would have the ability to opt out at any time by making a single phone call, while in savings bond example individuals were making a one-time decision to save some of their refund with no explicit opportunity to change their mind later. The decision was in fact binding for that year's refund and not for refunds in later years.

- the extent of inertia or 'status quo bias' amongst those one most wishes to influence. It has been suggested that young people today are less susceptible to such bias, having more desire to control their own economic circumstances and being more questioning of 'authority';[86]
- delaying the perceived impact of decisions. The longer the delay in realising the impacts of the default decision, the easier it should be to choose the default: thus, the effects of making a decision about increasing pension saving from future income are easier to accommodate mentally than making a decision now that impacts on current income;
- presenting default options that are not only simple but also familiar concepts to people. Thus, 'saving' should be a familiar concept, one that has resonances, but 'pensions', to people who may never have had one, may not be;[87] and
- whether and the extent to which there may be prior competing claims on people's incomes. The effectiveness of defaults is hypothesized through 'going with the flow' of people's existing biases and their mental status quo. If, however, people have pre-existing plans, these could serve to act as a competing status quo, undermining the power of the default option.[88]

Some research in the US has also compared different forms of defaults and enrolment decision-making processes in the context of enrolment in employer-provided 401(k) pension plans.[89] These defaults/processes range across the spectrum from 'standard enrolment', whereby employees are by default not enrolled and can choose to opt into a pension plan; to 'active decision', whereby employees are compelled to make a decision about enrolment one way or the other within a fixed time; to automatic enrolment, whereby employees are by default enrolled and can choose to opt out.

This research suggests that the 'active decision' approach increases participation and savings rates relative to the standard enrolment default, and is socially optimal when employees have a strong propensity to procrastinate and 'relatively heterogeneous savings preferences'.[90] However, default (automatic) enrolment is better when employees suffer from low levels of financial capability.

Much of the empirical US evidence is based on analyses of automatic enrolment into employer-provided DC plans such as 401(k), in which employers may or may not offer an additional contribution, so must be regarded with some degree of circumspection when thinking about its 'transferability' to the UK context. However, that the US is now moving towards automatic enrolment for all employees into either plans such as 401(k) or automatic Individual Retirement Accounts (IRAs)[91] suggests they regard the evidence as sufficiently compelling.

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86 Berry, C. (2011).

87 The authors of the same US evaluation felt that low-income tax filers might have shied away from saving in bonds because of their relative unfamiliarity and discomfort with the idea of purchasing savings bonds, relative to other forms of saving.

88 In the case of the US tax-filers evaluation, the authors found that the tax refunds had been mentally ear-marked for consumption or to pay off debts and bills. These intentions ('mental accounting') overrode other potential in-built behavioural benefits and incentives the default offered. Interestingly, this mental treatment of the windfall tax rebate contrasts with the accepted 'behavioural wisdom' that windfalls tend to be regarded as additions to wealth and not regarded as present income for consumption (see Shefrin and Thaler (1988)).

89 Carroll *et al.*(2009).

90 In effect, a workforce with a wide range of savings motivations.

91 The Automatic IRA Act was introduced to the Senate in August 2010 but has not yet been enacted.

The NEST automatic enrolment scheme in the UK has attempted to address these issues but there are still risks associated with such factors. It faces the difficulty of reaching people who are currently under- or, most likely, non-savers. Saving is unfamiliar and they may not have a natural tendency, or norm, towards saving. This raises the issue of the need for a different focus on communications around messages about saving: many in scope of automatic enrolment may have significant levels of loss aversion, especially around existing and future means-tested benefits, and be concerned with affordability.

Presenting opting out of NEST as a potential net loss to the individual in financial terms may, therefore, have an impact. Whatever the general messages, there will be a need to frame different messages for different segments of the population with different attitudes, characteristics and backgrounds. In addition, there will be a need to use appropriate messengers, in line with participants' experiences and expectations.

What is clear from this body of evidence is that transferring the experience of automatic enrolment from one setting to another may not always be possible.

7.4 Getting people to save more

As mentioned above, inertia and framing effects[92] may lead to people, once enrolled, disengaging from active decision-making about their pensions. Alternatively, those who may have enrolled voluntarily, either into NEST or an alternative scheme, save at a lower contribution rate than they would otherwise have done.[93] Indeed, even those not within scope of automatic enrolment may take its introduction as a signal to change their behaviour and, *in extremis*, reduce their contributions.

A potential consideration in this regard might, therefore, eventually be the combination of automatic enrolment with automatic escalation, i.e. an automatically administered gradual increase in employee contributions over time, usually in line with wage increases. Such mechanisms are being implemented by an increasing number of employer-sponsored schemes in the US and have their most obvious manifestation in the 'Save More Tomorrow' initiative in the US.[94]

Save More Tomorrow (or SMarT) was found to increase both savings incidence[95] and intensity, i.e. not only did it increase the numbers of people saving but the amounts saved (as proportions of incomes) increased relative to other comparable initiatives. Why? Thaler and Benartzi attribute this to the contractual, prescriptive nature of SMarT. Psychological traits such as procrastination and a lack of self-control are countered by committing people contractually to increasing their savings rates in line with their wages and salaries over time.[96]

In the UK, getting people on the 'savings ladder' has been the prime aim of policy in recent years. What happens once they are on the ladder has assumed secondary importance. That SMarT seems to have been relatively successful in the US contexts in which it has been applied does not guarantee it will be so in the UK: the seemingly strong inherited norms around pensions participation in the UK, the apparent reliance on other potential sources of retirement income and lack of individual

92 People may well regard the form that automatic enrolment takes on enrolment almost as a form of government advice, so that they do not seek to deviate from it.

93 See Choi *et al.* (2002).

94 See Thaler and Benartzi (2004).

95 Mainly through experiencing lower attrition, or drop-out, rates relative to other initiatives.

96 A further behavioural attraction is that by committing to save from future income, people are not saving more now and reducing current consumption.

engagement with pensions and retirement planning relative to the US may militate against individuals increasing their contributions. Another factor is whether such a measure would be as effective in an economic downturn as it appeared to be during the relatively strong growth period of the early 2000s in the US.

Other evidence from the US tends to support the relative importance of psychological factors in savings behaviour. A 2006 analysis of participation in Individual Retirement Accounts (IRAs) in the early 1980s found strong evidence for the impact of 'loss avoidance' and structural framing effects: individuals appeared to contribute more to IRAs as a result of the way these accounts were operated during the tax year, rather than them offering clear, positive tax advantages. The author of the study[97] concludes that such framing effects offer policy makers potentially less costly features to incorporate in the design of savings incentives than, say, tax subsidies.

Other US studies have found evidence of framing effects. A review of the impact of Savers Credit,[98] whereby, at the time of the review, individuals could claim a tax credit on the first $2,000 (for each spouse) contributed to an IRA or voluntary pension plan, found 'significant but very modest' impacts of the Credit on savings behaviour. A possible explanation for this was that people find the concept of a 'credit' difficult to understand. Experimental evidence presented by the authors strongly suggested that presenting incentives in the form of a match, rather than a credit, would probably result in greater take-up.[99]

Another found that supplemental, non-mandatory, pension contributions made by university faculty members varied substantially depending on whether the contributions were presented as salary deductions or as supplementing employer contributions.[100] This analysis, therefore, finds evidence, in this particular context, for both framing effects and the presence of 'mental accounting'.[101]

It is difficult to draw conclusions about how such effects might play on particular circumstances in other countries or scenarios. Individuals may be more engaged with their personal tax gains and liabilities 'around the margin' in the US (through having to complete an annual assessment), so framing effects might be more prevalent there. Certainly, the direction of policy in the UK has swung more towards using defaults and changing the choice architecture. This does not mean policies around taxation have no role, rather, it may be that for the majority of those whom policy-makers wish to influence it may not be as effective a lever in the absence of consideration of behavioural influences.

Thus, ongoing proposals for reforms in the US, even those which rely on tax-based incentives, have a strong focus on 'default' solutions: one policy option likely to be enacted is to allow taxpayers to purchase US savings bonds through their tax refunds by ticking a box on their tax returns.

Changes to 'choice architectures' around other types of incentives have also been proposed: from making the physical act of saving easier (through, for example, providing 'savings points' in supermarkets to a 'default', in the US of converting unused annual leave to 401(k) savings, to easing the transferability of different forms of saving, for example, ISAs and pensions in the UK).

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97 Enis (2006).

98 Duflo *et al.*(2007).

99 The authors presented people with the financially-equivalent options of a 50 per cent match or a 33 per cent credit. The 50 per cent match looked 'larger' than the equivalent 33 per cent credit and take-up was larger in the experiment.

100 See Card and Ransom (2011).

101 It appears that faculty members mentally 'compartmentalised' the sources of their contributions, i.e. their salary and the employer's contributions and regarded them differently.

There are issues here over the extent to which the choice architecture should be adapted to accommodate people's existing tendencies.[102] Attempts to accommodate behavioural tendencies such as 'mental accounting', (whereby people treat different sources of income and wealth differently[103]) might for example focus on the incentive of a lump sum payment rather than regular but smaller payments as lump sums appear more attractive. Likewise, bringing forward the actual and perceived benefits of saving, for example, early access to pensions saving might encourage the take-up of saving schemes.

This 'bending' of the architecture might carry with it the risk of accusation of complicity in almost encouraging existing behaviours, or sending the wrong signals or of having a greater likelihood of unintended consequences. The perceived benefits of such incentives need to be weighed against the potential costs and against the benefits and costs of other potential measures such as direct intervention.

Another, perhaps more fundamental, philosophical, consideration is the extent to which such 'default' changes infringe people's liberty to make their own decisions. Besides having a common theoretical basis in the principles of 'libertarian paternalism', in practice, some measures might appear more 'paternalistic' than others.

Thus, some have proposed more concerted and well-targeted measures aimed at encouraging greater savings participation amongst those less likely to save, including a focus not just on characteristics but on motivations and planning, rather than a wholesale reliance on default solutions such as, say, automatic enrolment.[104] Indeed, as noted in Section 3 above, a potentially better solution in specific circumstances, and one that seems to be less 'paternalistic' than many defaults, is that based on 'active decisions'.

7.5 Simplifying the pensions system

Behavioural theory postulates that in making potentially complex decisions individuals rely on heuristics (or 'rules of thumb'). Decisions around planning and saving for retirement are becoming more complex as employers and individuals shift from defined benefit to defined contribution pension schemes. Individuals' levels of financial capability might well determine the nature and complexity of the heuristics adopted and patterns of saving.[105] It may also be the case that individuals' decision-making is most vulnerable during the transition to defined contribution systems.[106]

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102 Thaler and Sunstein (2008) make the distinction between measures to address a golfer's swing that try to compensate for the swing, for example, if one slices the ball, aim left to start with, i.e. accommodate their existing biases and those that address the problem head-on by standing or addressing the ball differently, i.e. try to change them.

103 For example, people may tend to save more of an income from equity dividends than from salaries.

104 Lusardi *et al.* (2008).

105 Lusardi (2008).

106 This is because individuals under defined benefit have tended to rely on government and employers and not improved or maintained their levels of financial literacy. Jappelli (2008) found an inverse relationship between the generosity of public pension systems and levels of financial literacy across 55 countries studied (Jappelli. (2009)).

In behavioural terms any rules of thumb that serve to reduce the complexity of the decisions and choices faced by people is seen as a benefit. The more the rules are founded on empirical observation of people's attitudes, circumstances and characteristics (including their financial capability) so much the better. However, it may be the case that existing rules of thumb are not relevant to ensuring an adequate pension in retirement. DWP research in 2010 found that many people use rules of thumb based on their current income or wealth and not on what their future needs might be. This suggests steering people towards rules of thumb that have some relevance to these future needs.

The effects of the introduction of the single tier pension, a simplification of the State Pension system, will be interesting to evaluate. On the one hand, the setting of the level of the single-tier pension has to take into account potential wealth effects whereby people feel they have to save less privately if they know the value of the State Pension will be higher and guaranteed.

On the other hand, the main focus of the single-tier, and the main savings incentive, will be to reduce the complexity of the decision to save for the future. All things being equal, a simpler system should engender a higher level of cognitive trust[107] in a simplified pension system. Thus as Ring (2005) notes:

> *'If a base line of economic security in retirement is guaranteed through the State Pension then people may be more willing to save more of their income for retirement because the 'heat' has been taken out of the planning.'*[108]

As however already noted, it is imperative, in promoting behavioural incentives, to take account of the context and circumstances in which the incentive is deployed. Thus, with single tier, while one may wish to promote it in behavioural terms as a vehicle to provide a minimum level of financial security upon retirement, and thereby as the foundation for private pension saving, many people may also fear losing other future means-tested benefits if they do save more in the meantime. Indeed, there is a growing and persuasive body of evidence that loss avoidance, including that of benefits, is a powerful behavioural trait of many people.

7.6 Further analysis

It is tempting to think of 'behavioural solutions' to seemingly intractable problems, such as getting people to start saving or save more, as potential panaceas. However, what developments around savings incentives policies in both the UK and elsewhere appear to highlight is the need not to attempt to divorce mentally traditional economic and behavioural thinking. Rather, what the discussion in this paper suggests is that one should try to integrate systematically and consistently behavioural and economic factors into analytical frameworks in order to judge the effectiveness and impact of incentives policies.

That such frameworks seem to be relatively few in number suggests that this is no easy task methodologically – most analyses that have attempted to assess the relative weight of behavioural factors appear to have taken advantage of 'one-off' particular circumstances and to some extent present inconsistent findings– but also that the growing body of evidence they constitute suggests it is important to do so.

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107 In effect trust based on rational judgement rather than emotions or 'gut feelings'.

108 Ring, P. (2005).

The recent House of Lords report on behaviour change[109] concluded that non-regulatory measures, including 'nudges', are less likely to be effective if used in isolation, and that effective policies often use a range of interventions. Thus, integrating behavioural and traditional economic measures is probably the best way forward and these in turn, should sit alongside other measures, such as regulation in the range of policies at one's disposal. What this paper also suggests is that this entails integrating these behavioural influences and forms of analysis into traditional models rather than ditching one or the other.

[109] House of Lords Select Committee on Science and Technology. Second Report – Behaviour Change (2011).

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This Working Paper looks at 'behavioural' savings incentives: how these compare with 'traditional' economic incentives, and available evidence, from the US and elsewhere, on the factors that might impinge on their successful implementation. This analysis suggests that success is by no means a foregone conclusion, and that careful planning and understanding of the characteristics, attitudes and behaviour of those the policies are trying to influence are essential.

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