

Building an income for retirement: approaches to encourage more pension saving

A discussion paper by Age UK

Using the National Institute of Economic and Social Research's LINDA model



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Contents

Executive Summary.....	5
The four scenarios.....	5
Scenario 1 – Higher employer contributions.....	6
Scenario 2 – Matching employer contributions.....	6
Scenario 3 – Automatic escalation of contributions / Save More Tomorrow.....	6
Scenario 4 – Mandation.....	6
Emerging themes.....	7
People on middle incomes.....	7
Rewards for saving are skewed.....	7
Barriers to saving.....	7
Impact on employers.....	8
Chapter 1: Introduction.....	9
Note on the potential implications of Budget 2014.....	10
Chapter 2: The impact of the Single Tier State Pension.....	12
Impact on income.....	12
Conclusion.....	13
Chapter 3 – The Four Scenarios.....	14
Scenario one – Higher Employer Contribution.....	14
Scenario two – Employer Match.....	15
Scenario three – escalating contributions - Save More Tomorrow.....	16
Scenario 4 – Mandation.....	17
Chapter 4 – Pre-State Pension age impact.....	18
Change in take-up.....	18
Change in private pension contributions.....	20
Pension contributions by income level.....	20
The impact of age on pension contributions.....	21
Change in income.....	22
The change in net disposable income for different income groups.....	23
Changes in disposable income.....	24
Impact on labour supply.....	25

Conclusion	27
Chapter 5 – Pensioner Impact.....	29
Pensioner incomes.....	29
Welfare benefits	31
Overall effect on pensioner income	33
Wealth.....	34
Conclusion	36
Chapter 6 – Lowering the statutory employee contribution	37
Take up of private pension saving.....	37
Private pension income.....	38
Welfare benefits	38
Disposable income	39
Conclusion	40
Conclusion	41
Annex A: Method.....	42
Annex B: sources of income.....	47

Executive Summary

This research addresses the question ‘how can people be incentivised to save’? It models four primary scenarios – higher employer contributions; matching employer contributions; auto-escalating contributions; and mandate. It aims to evaluate the potential for boosting private pension saving and what might be the consequences of this for individuals.

It examines a range of outcomes for each scenario, including breaking the overall findings down by demographic and social factors such as age and income quintile. It follows individuals through their life course and shows how a typical person within each group fares at different points throughout their life.

The results highlight that engaging more people in saving for retirement and increasing contributions to private pensions do not always deliver improved outcomes. For some individuals, there are clear disincentives to save, while for others the short-term cost of saving makes doing so unfeasible. These are key issues that need to be addressed by policy makers as reforms are made.

The key findings can be illustrated through two different viewpoints: firstly, by looking at the specific findings of each scenario; and secondly by examining the cross-cutting issues arising under all scenarios.

The modelling was carried out by the National Institute for Economic and Social Research, using its LINDA model, which is a development of NIBAX funded by a number of organisations, including the Department for Work and Pensions and HM Revenue & Customs.

It simulates the lifecycle of a cohort of individuals aged 22-30 in 2006. There is of course a great degree of uncertainty when making projections into the future, so this report should be read not as the last word on the matter, but as a means of gaining some insight into what this might plausibly look like. Fuller methodological details are given in Annex A. We hope this paper will start a debate – it is not intended to provide any definitive solutions at this point.

The four scenarios

Before examining the four savings scenarios, the research first adjusted for the introduction of the Single Tier state pension. It found that the new system will be broadly redistributive, with individuals towards the lower end of the income spectrum better off financially compared to the current system. However, once they reach State Pension age lower earners will lose income from other sources such as housing benefit, resulting in some of the obvious gains under the more generous state pension system being offset to some extent.

Scenario 1 – Higher employer contributions

This scenario describes what happens when employers increase contributions for people saving into the statutory minimum auto-enrolment schemes and more generous defined contribution schemes. The main findings are:

- This scenario increases private pension wealth for all individuals, but does not necessarily boost disposable income for lower earners post-retirement.
- Middle-earning households increase saving more than lower earners as they are more likely to be in a pension scheme to begin with and they are better able to afford to take advantage of the additional incentive to save.
- It also generates favourable increases in pension income and household wealth in retirement that are less skewed towards higher earners than some of the other scenarios – although higher earners are still the main beneficiaries – and at no additional cost to the scheme member.
- However, when broken down by income quintile this gain is focussed on the top 40 per cent of earners. The middle quintile receives a very marginal increase in disposable income, while the bottom two quintiles suffer a reduction.
- Many lower earners are unable to respond even to this generous incentive. If you are not in work then you are not eligible; if you cannot afford to save then you cannot afford to save.

Scenario 2 – Matching employer contributions

Rather than increasing contributions for all participating employees, employers only do so for those who make an additional payment themselves. The main findings are:

- Take up is strongly skewed to mid-high earners and is very low among the bottom 40 per cent of earners.
- This suggests it is the top three quintiles, particularly the highest quintile that can afford to make the additional payments and take advantage of the higher employer contributions on offer.¹
- Lower earners are incentivised to increase their savings even at the cost of disposable income, but to a lesser extent.
- However, this scenario delivers an overall loss in household net disposable income over the individual's lifetime for all but the top two quintiles. The benefits of this scenario are therefore consigned almost entirely to higher earners.

Scenario 3 – Automatic escalation of contributions / Save More Tomorrow

Only very marginal impacts were observed for this incentive. However, the results are likely to underestimate of the impact of this scenario as the effects of human inertia observed under automatic enrolment are likely to have significant impact on behaviour if this incentive is offered in practice.

Scenario 4 – Mandation

The final scenario we considered was one of mandation into a private pension, which has been successfully implemented in Australia. The main findings are:

- Unsurprisingly, mandating contributions leads to an increase in overall contributions!

¹ The five quintiles run from quintile one at the bottom of the income distribution to quintile five at the top.

- However, pursuing a policy of mandatory contributions would have significant implications for the bottom two income quintiles' standard of living while under SPA, as well as the wider economy as consumption would reduce.
- Mandation has a small positive impact on pensioner net disposable income but a negative impact over an entire lifetime. It also forces individuals to make contributions against their better judgement and would lead to additional contribution costs for employers.

Emerging themes

A holistic view of the research illustrates some important cross-cutting themes that affect the engagement of the majority of people in additional pension saving.

People on middle incomes

The third quintile in the income distribution faces particular challenges in saving for retirement. Overall, despite the fact that middle income households will be slightly less well-off under the single-tier pension it does appear to be relatively easy to incentivise them to save more into a private pension scheme.

The question is whether it is efficient for them to do so. Under current rules, the middle quintile loses significant amounts of welfare support as a result of increasing their private pension saving. This suggests that, in order to incentivise people in this band to save, reform to the benefits or tax systems will be needed to ensure they do not lose out as a result of taking responsibility for their own retirement income.

The middle quintile *could* save more, but at present are strongly disincentivised from doing so.

Rewards for saving are skewed

When offering universal incentives to save it is clear the top two quintiles in particular are more likely to benefit. This is partly because higher earners are more likely to work for organisations that provide more generous defined contribution schemes, but perhaps even more so because it is easier for them to switch household expenditure towards pension saving.

Access to saving is therefore easier and more affordable than for lower earners. Any reforms based solely on the lines modelled in this research are less likely to reach those who would perhaps benefit the most from increased retirement income.

Barriers to saving

Lower earners seem to face an insurmountable barrier to saving for retirement. To see whether this group could be better targeted we tested one final scenario where, rather than requiring employees to opt out completely of scheme membership, members were able to reduce their contribution to 3% with

the employer maintaining the overall contribution rate at 8%. Take up did increase in all but the very youngest employees. However, once again the middle quintile saw the greatest benefit.

Therefore it seems that affordability is the biggest barrier to fully engaging many more lower paid workers.

This is something for the Government to think about if opt out rates increase as the contribution levels under automatic enrolment rise. There may be alternatives that help mitigate this problem, including by drawing on the incentives modelled in this discussion paper.

Impact on employers

There are significant arising issues for employers. It is clear from the response to the scenarios that many employees are willing to engage in pension saving given the right situation and incentives. Workplace pensions are already used by some employers as a tool for attracting and retaining the best employees and the scenarios suggest ways of attracting different sorts of workers. Important issues for employers to consider include:

- Retirement policies – how having an attractive pension will impact on incentives to retire and workforce planning.
- Which of the different saving options would incentivise their workforce or groups of employees.
- How best to communicate with different groups of employees about the impact of (not) saving into a workplace pension.

Chapter 1: Introduction

The number of employees in the UK that are members of an employer sponsored scheme is estimated to be fewer than half (46%)². According to the ONS, the number of active members of occupational pension schemes has fallen from a high of 11.1m in 1983 to 7.8m in 2012³. This fall in membership has come alongside a decline in the number of defined benefit schemes open to new members and an increase in defined contributions schemes, which can involve lower contributions levels from the employer and result in less certain outcomes in retirement for scheme members.

Many of those that are saving into a pension are unable to accurately estimate what their expected future income from private pensions will be, particularly members of defined contribution schemes⁴. Savers also have a tendency to overestimate their pension wealth and often they have given no thought to how long they might live in retirement. This combination of factors means that many people realise too late that they are likely to have inadequate retirement income, when they are too close to retirement age to make up the deficit.

In an effort to encourage more people to save for their retirement, the Government introduced a requirement for employers to automatically enrol all eligible members of their workforce into a pension scheme (automatic enrolment) from 1 October 2012. By October 2013, 1.9m people had been automatically enrolled across nearly 3,000 employers.

Automatic enrolment could eventually increase the number of individuals newly saving or saving more in a workplace pension by nine million, although employees who are automatically enrolled can still opt out of pension saving if they wish. Once the reforms have been fully implemented in 2018, every employer in the UK will have to provide a pension to their workers and pay minimum contributions.

Opt out rates so far have been very low. Research by the DWP among large employers with staging dates between October 2012 and April 2013 showed an average opt out rate of 9 per cent⁵.

Low opt out rates have been helped by the phasing of contributions. The impact on the employee's pay packet can be less than one per cent in the early years. However, by 2018 contributions will have increased to 8% with only 3% being the legal minimum from employer. This could have an impact on participation, particularly among lower earners.

² Annual Survey of Hours and Earnings

³ Occupational Pension Schemes Survey 2012

⁴ NAPF/ESRC

⁵ Department for Work and Pensions, Automatic enrolment opt out rates, August 2013

Even if opt outs remain low, there is a common consensus that contributions levels into occupational DC schemes need to increase. Saving at the minimum contribution rate of 8% of band earnings may not be enough for some individuals. Total contribution levels in the range of 12-15% are more realistic if savers are to be provided with a reasonable retirement income.

This discussion paper uses the National Institute of Social and Economic Research's LINDA model to simulate different scenarios, each demonstrating the wider impact of changing savings behaviour. The LINDA model is based on NIBAX, a model that simulated the lifecycle of a cohort of individuals aged 20 in 2006. The development of NIBAX was funded by a number of organisations, including the Department for Work and Pensions and HM Revenue & Customs.

The LINDA model extends NIBAX by simulating the lifecycle of all individuals aged 22-30 in 2006. The development of LINDA from the NIBAX model was funded by HM Treasury. Further detail on the assumptions of the LINDA model is outlined in Annex A. We hope this paper will start a debate – it is not intended to provide any definitive solutions at this point.

We will consider a number of incentives to maximise participation rates and increase contribution levels in the coming years: employers matching contributions, higher employer contributions, mandation, and 'save more tomorrow' escalation of employee contributions whereby employees commit a proportion of a future pay increase to be allocated to pension saving.

We will consider the spin-off effects of changing the system, for example the impact on current disposable income, particularly for lower earners. Increasing participation in private pension saving is likely to be an ever-increasing aspect of public policy. However, this needs to be addressed at the right time and in the right way, or changing incentives to save could have a perverse effect on the very people it is trying to help.

Note on the potential implications of Budget 2014

The Government announced in Budget 2014 that from April 2015, the tax rules will change to allow people to access their Defined Contribution (DC) pension savings as they wish from the point of retirement. Drawdown of pension income under the new arrangements will be taxed at marginal income tax rates rather than the current rate of 55% for full withdrawals. The tax-free pension lump sum will continue to be available. Those who want to purchase an annuity will still be able to do so but it will also be possible for people to withdraw all their pension savings in a lump sum or keep their pension invested and access it over time.

This change could clearly have implications for individuals' propensity to start saving into a DC scheme or to save more into their existing plan. In April 2014 the NAPF conducted a survey of people in work with access to a workplace pension to ascertain whether this change might provide an additional incentive for people to save into their workplace scheme.

For most people, the reforms were likely to make little difference to their level of pension savings. However, 28% of respondents did say they were likely to start saving or to save more. This was particularly true of people on the lowest incomes. Among those on middle to high incomes, between 25% and 34% believed they would start saving or save more, with higher income individuals more likely to do so.

Whilst the increased flexibility could prove to be an additional incentive to save, as with other incentives discussed in this paper, increased flexibility at decumulation this is likely to be of greatest benefit to higher earners. The fact that people on lower incomes reported they were more likely to save is encouraging, but, as the modelling in this discussion paper has identified, it may be that those on the lowest incomes simply cannot afford to save, despite wanting to do so.

Chapter 2: The impact of the Single Tier State Pension

A new system of State Pension is due to be introduced in April 2016 and will apply to people who reach state pension age (SPA) after this date. When fully implemented those who meet the qualifying criteria will receive a flat-rate weekly payment of approximately £144 (in 2012-13 earnings). Those reaching state pension age before April 2016 will continue to receive a state pension in line with the current rules.

The single-tier pension (STP) aims to bring in a system where people can be much more aware of what they can expect to receive in their retirement from the State ensuring that people can plan and save for a comfortable retirement. In this chapter we examine the impact of the State Pension changes relative to the current system.

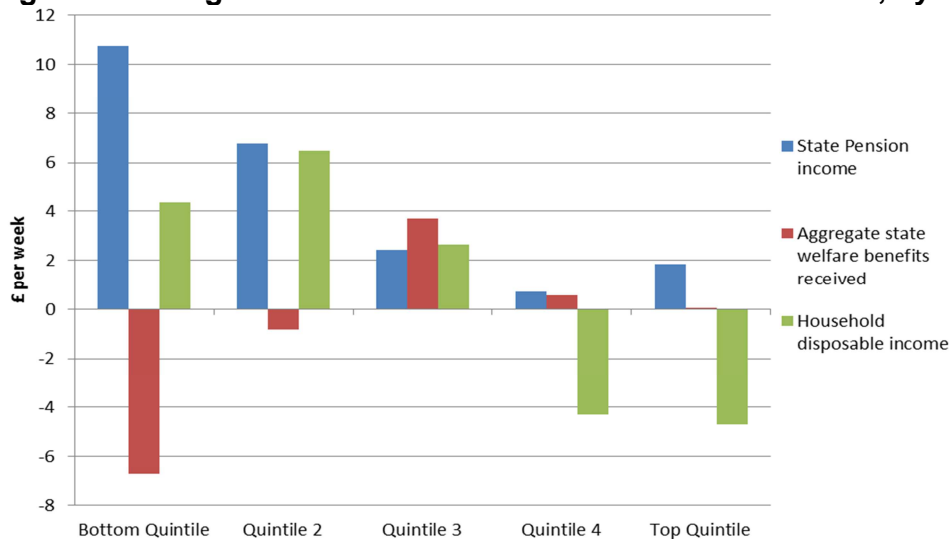
Impact on income

The impact the STP will have varies across the income spectrum. Firstly, we considered how much the STP would affect people's incomes over their entire lifetime. The impact varies across the income spectrum. People on lower earnings will receive more State Pension income compared to under the current system, although this is partially offset by losses of means-tested benefits after they reach SPA. **Figure 1** demonstrates the impact of the STP on three different forms of income: State Pension, other welfare benefits and net disposable income (DI). DI is the amount of money after all income sources and deductions have been considered. It shows clearly that the highest earners (top quintile) suffer the largest drop in absolute terms⁶ in overall disposable income during their lifetime.

Those on the very lowest incomes (bottom quintile), who are the most reliant on state benefits, have the most to gain from the State Pension reforms, notwithstanding a slight drop in their private pension income. The second lowest quintile (quintile 2) also sees a net gain. However, once we start looking at the middle quintile and above, disposable income is reduced overall.

⁶ It should be noted that changes in absolute income will have a proportionately lower impact on those at the higher end of the income scale.

Figure 1. Change in income levels after State Pension reform, by income quintile⁷



Conclusion

The STP is broadly redistributive, with individuals towards the lower end of the income spectrum financially better off overall when compared to the current system. Those on the very lowest incomes (bottom quintile), who are likely to be almost entirely reliant on state benefits, gain the most from the State Pension reforms.

The two lowest income groups are likely to have reduced income from other welfare benefits making them more reliant on the new STP system to maintain a decent standard of living.

This emphasises just how important developing and maintaining a good State Pension system will be if we are to avoid increasing numbers of older people living in poverty.

⁷ Lifetime equivalised income levels among population, by income quintile

Chapter 3 – The Four Scenarios

We now turn to how individuals might be incentivised to save more into their private pension. We considered four hypothetical scenarios, each utilising a different incentive for saving:

1. Higher employer contribution – where employers increase contributions into schemes with automatic enrolment statutory contributions and defined contribution schemes with higher than statutory contributions.
2. Employer match – where employers match employee contributions into schemes with automatic enrolment statutory contributions and defined contribution schemes with higher than statutory contributions.
3. Save More Tomorrow - where employees enrol into the appropriate scheme before contributions levels are increased in years two and three.
4. Mandation – where employee contributions are made mandatory at the baseline level⁸ for all types of scheme.

Each of these scenarios is explained in detail in this chapter. Chapters 4 and 5 then go on to compare how each scenario affects a number of variables such as take-up, income and levels of pension contributions, reflected as far as possible by their impact on life pre and post-retirement.

The levels of employer and employee contribution vary between scenarios and the comparisons of individual variables shown in Chapters 4 and 5 should be considered as indicative only – to understand each scenario's full impact it must be considered as a whole.

The changes in behaviour predicted under each scenario are reported relative to a baseline scenario assuming that that the Single-Tier State Pension discussed in Chapter 2 has been introduced.

Scenario one – Higher Employer Contribution

The Higher Employer Contribution scenario models a situation where the employer offers more generous contributions for all participating employees for both automatic enrolment schemes with statutory contribution levels and defined contribution schemes with contribution levels above the statutory minimum. Employer contributions levels for DB schemes do not increase, because the model assumes a high employer contribution of 17%.

This scenario seeks to quantify the impact of a more generous employer contribution, assuming individuals remain in the same scheme. The increase in employer contributions for defined contribution schemes is minimal but representative of the level required to achieve a 'PQM PLUS' rating from Pensions Quality Mark⁹ whereby contributions must be 15% including an employer contribution rate of 10% or more.

⁸ See Annex 1 for an explanation of the baseline scenario

⁹ An initiative introduced by the NAPF to promoting good quality pensions rebuilding and promoting public confidence in workplace pensions.

The table below summarises the alterations in this scenario:

Scheme	Employee contribution rate	Baseline employer contribution	Modelled employer contribution rate
Auto enrolment with statutory contributions	5%	3%	6%
Defined contribution with higher than AE statutory contributions	5%	9%	10%
Defined benefit	6%	17%	17%

Scenario two – Employer Match

This scenario considers whether individuals are incentivised to increase their contributions by offering a larger employer contribution should the employee make contributions above a certain threshold.

This scenario has two potential impacts:

- 1) some individuals already participating at the baseline contribution level may choose to step up their own contributions to access the higher matching contributions available from the employer; and
- 2) some individuals not participating at the baseline level may now choose to participate in the scheme, given the higher employer contributions they can access by making contributions of their own.

The following table shows the changes, with the higher ‘matched’ amounts:

Scheme	Employee contribution rate	Higher employee contribution	Baseline employer contribution	Higher ‘matched’ employer contribution
Auto enrolment with statutory contributions	5%	8%	3%	8%
Defined contribution with higher than statutory contributions	5%	8%	9%	12%
Defined benefit	6%	6%	17%	17%

Scenario three – escalating contributions - Save More Tomorrow

This scenario is based on the Save More Tomorrow™ (SMT) pension model, where individuals can commit, when they start to save, to higher conditional contributions in the future as their earnings increase.

The Save More Tomorrow¹⁰ theory was devised by Richard Thaler (University of Chicago) and Shlomo Benartzi (University of California, LA)¹¹ using the human traits of procrastination and inertia to increase employee pension saving. In their initial study of three companies they found:

- In the absence of automatic enrolment, the best results are achieved when individuals are provided with one to one advice on joining the scheme.¹²
- With automatic enrolment built into the scheme Thaler and Benartzi project that 90% of employees would join and savings rates would rise from 5% to 10.9% within 5 years¹³.
- 80% of those who enrolled after one-to-one advice were still in the programme after the fourth pay rise. Even those that withdrew maintained existing contributions, they only opted out of future increases.
- Those participating ended up with much higher savings rate than those who accepted a consultant's recommendation of a single non-increasing contribution rate.
- For those people who would otherwise have chosen a high contribution rate from day one, the SMarT scheme potentially results in lower savings overall.

However, the model used in this discussion paper does not assume that eligible employees are automatically enrolled into the scheme which could have a significant impact upon the potential take up rates. What is captured is the extent to which i) individuals have a willingness to save more than the fixed maximum contributions they can save in the baseline scenario and ii) whether the opportunity to 'set and forget' this upfront motivates more of them to do so.

¹⁰ Save More Tomorrow (SMarT™) : Using Behavioral Economics to Increase Employee Saving. RH Thaler and S Benartzi, 2004

¹¹ Save More Tomorrow™ : Using Behavioral Economics to Increase Employee Saving. RH Thaler and S Benartzi, 2004

¹² In a non-auto-enrolment environment.

¹³ Based on 2% increment increases in contribution and averaged over all employees whether they saved or not.

Scheme	Employee Contribution	Maximum Employee contribution	Minimum Wage increment	SMT increment	Employer Contribution rate
Auto enrolment with statutory contributions	5%	9%	2%	2%	3%
Defined contribution with higher than statutory contributions	5%	9%	2%	2%	9%
Defined benefit	6%	n/a	n/a	n/a	17%

Scenario 4 – Mandation

The Mandation scenario requires anyone joining an employer, who meets the eligibility requirements, to be placed into a pension scheme and to make contributions. For the sake of simplicity, and bearing in mind that in the UK such an option would have to be introduced to a landscape with both automatic enrolment in place and a mix of existing pension provision where some employers actively choose to offer more generous schemes, we assume that the mandation applies at the contribution levels modelled in the baseline for each type of scheme.

Scheme	Employee Contribution rate	Employer Contribution rate
Auto enrolment with statutory contributions	5%	3%
Defined contribution with higher than statutory contributions	5%	9%
Defined benefit	6%	17%

Chapter 4 – Pre-State Pension age impact

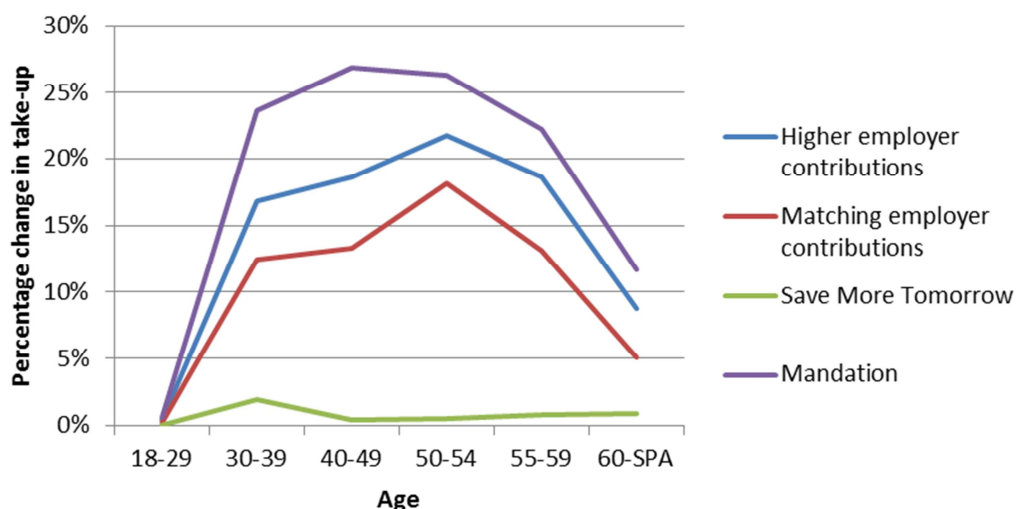
In this chapter we will compare the scenarios directly across a number of factors including income, wealth and the welfare system. Each scenario will be considered where appropriate and where it has a recognisable impact. As a consequence, not all scenarios will be considered for each variable. In addition, it is worth noting that disposable income is impacted right across the life course – although we consider it in this chapter, it is also relevant for the chapter on post-SPA impact.

Change in take-up

Take-up of private pension saving increases under each of our four scenarios. However, for DB schemes, and for DC schemes with contribution levels above the statutory minimum, the increase is negligible. In both cases only the 60-SPA age group experience a noticeable difference (a drop), showing that older workers are less likely to sign up to DB schemes or DC schemes with contributions above the statutory AE minimum.

Figure 2 also suggests older workers are more likely to opt out of automatic enrolment schemes. The decline in take-up at older ages is due to a smaller share of workers in this category being eligible for Type 1 automatic enrolment schemes (e.g. because older workers are more likely to be in part-time work earning below the minimum threshold for automatic enrolment). This is evident because the decline is present for the mandation scenario as well as the other three scenarios. Older workers are also less responsive to incentives to save into a pension as illustrated by the lower increase in pension contributions from older workers shown in **Figure 7**.

Figure 2. Change in take-up of automatic enrolment schemes for each scenario by age



The Employer Match scenario warrants further examination here as there are two elements at play. As well as increased take up from people that are not already saving, there is the potential for those already in the scheme to access higher employer contributions by saving more themselves. These people will not be captured in **Figure 2** but they will be captured by other variables monitored in the analysis.

Figure 3 shows the change in pension take up by eligibility and age. Not surprisingly, the effect on the whole population is more limited than on those who are eligible for automatic enrolment and other defined contribution schemes (schemes 1 & 2) as it is diluted by the ineligible individuals.

Among those that are eligible increased take-up peaks at around two-thirds among 50-54 year olds and is also over 50 per cent among 40-49s and 55-59s. There is a strong impact across the board – across the life course the average increase is 48.3 per cent.

Figure 3. Change in take-up rates under the Employer Match scenario

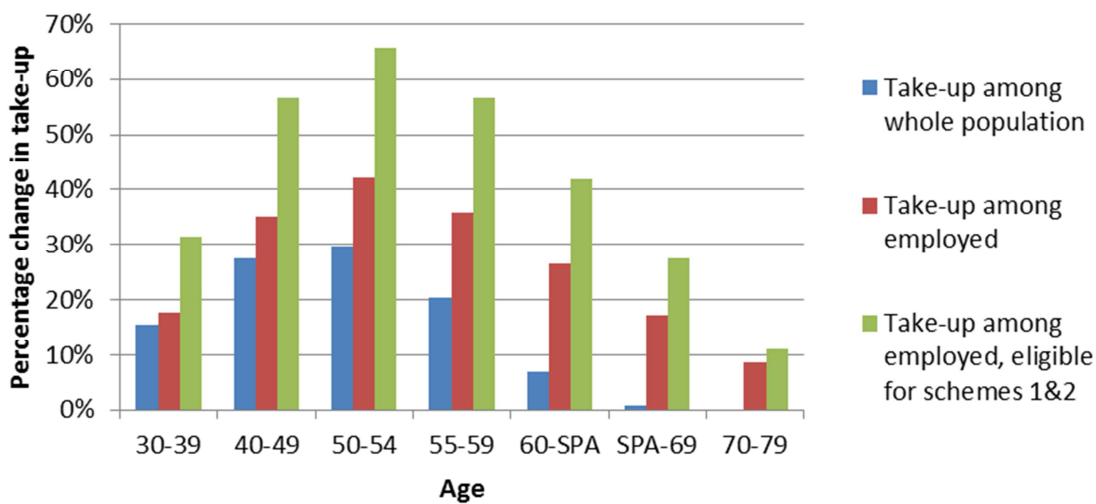
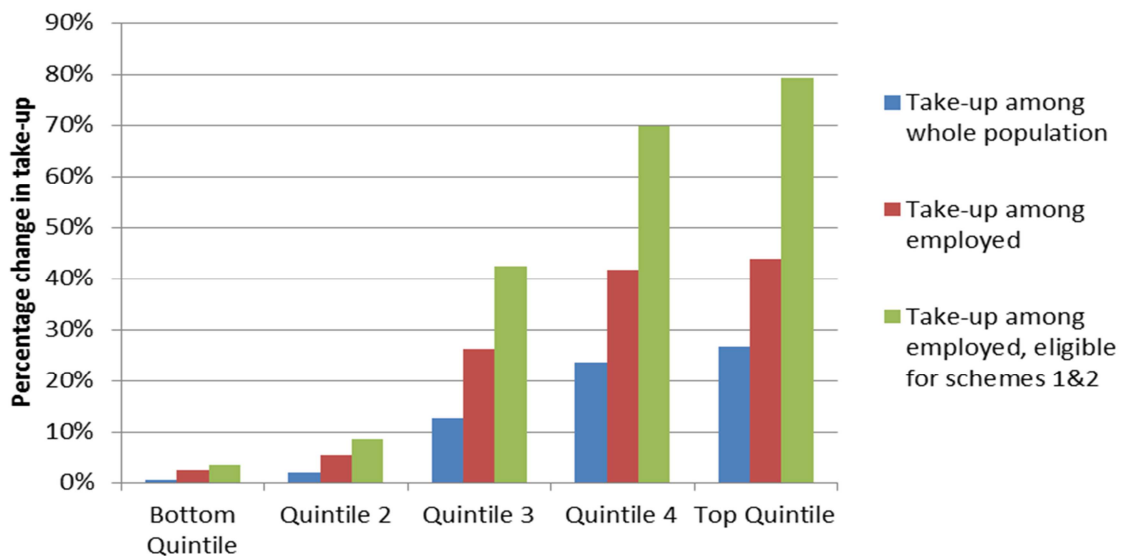


Figure 4. Change in take-up rates under the Employer Match scenario, by income quintile



Looking at income level, those in the bottom two quintiles are particularly difficult to target, even when there are additional rewards on offer. This is likely to be because people simply cannot afford to make the additional contribution. The greatest impact is on the top two income quintiles - those that have the

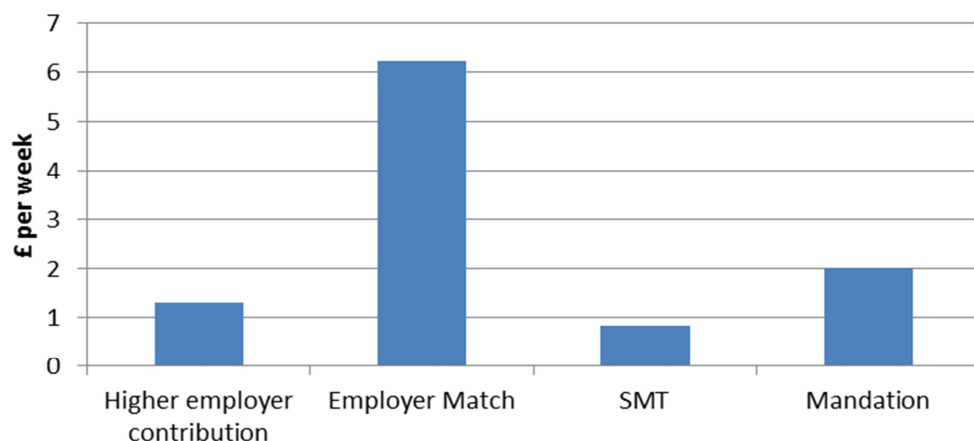
ability to make the extra contribution. However, it also delivers a significant increase in take-up among the middle quintile, albeit on a much smaller scale. This is shown in **Figure 4**.

The benefits of matching contributions are weighted strongly towards higher earners, but could incentivise lower earners to increase their savings. However, this is viewing the scenario purely in terms of engagement, whereas to consider the overall effect outcomes need to be considered as well.

Change in private pension contributions

Figure 5 shows the overall change in weekly saving into private pension schemes under each of our four main scenarios. It is clear that the Employer Match scenario delivers the biggest cumulative increase in contributions (£6.22 pw). This is more than three times the second highest scenario, the Mandation scenario.

Figure 5. Average changes in private pension contributions across whole population¹⁴



It is also worth considering the surprisingly minimal impact of the SMT scenario. The model employed in this discussion paper does not assume that eligible employees are automatically enrolled into the scheme. Neither does it account for the potential for strong employer communications and engagement, both of which could have a significant impact upon take up rates. This could go some way to explaining why the impacts of this scenario are lower than we would have expected.

Pension contributions by income level

Closer inspection of the how changes in contributions are affected by income shows that the biggest impact is seen under the Employer Match Scenario among those on higher incomes. **Figure 7** shows that the top two quintiles pay in far more than the bottom three.

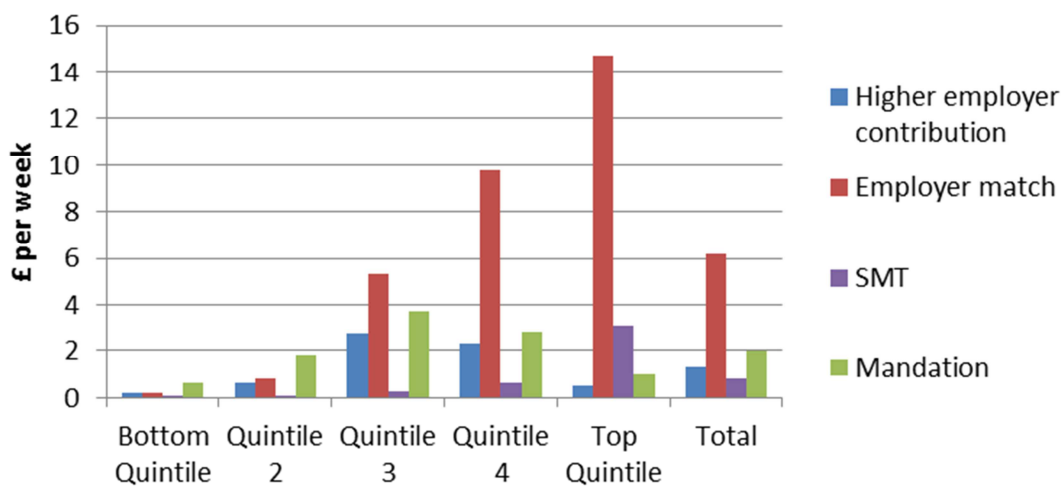
Higher earners are much better placed to make additional payments, and therefore take advantage of the more generous incentives. Lower earners simply cannot afford to make the contributions necessary to access the incentive.

¹⁴ Average lifetime equivalised impact

However, quintile 3 is a key target group for pensions policy, and the Employer Match scenario has the largest impact on pension saving for this group.

The Employer Match Scenario potentially incentivises people in the third quintile to save, although this approach does come with caveats, in particular the significantly more positive impact on higher earners.

Figure 6. Changes in private pension contributions by income quintile¹⁵



The other two scenarios included here have different effects. The mandate scenario has the greatest impact on saving among middle-earners, possibly because higher earners are more likely to already be enrolled in a pension scheme.

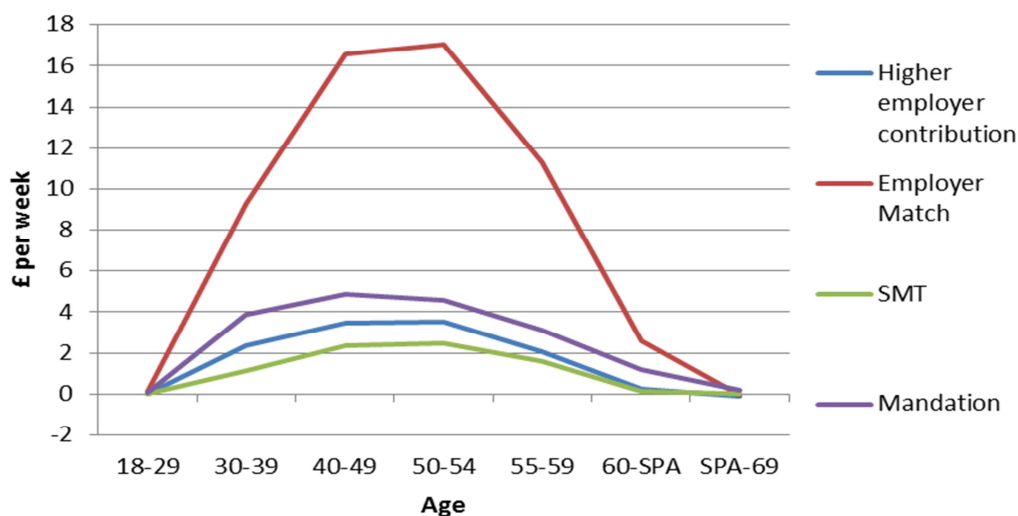
Furthermore, because those in the top two quintiles are more likely to be in DB schemes when they are already saving, there is no additional benefit for them under the Higher Employer Contribution scenario (where employer contributions remain static at 17%).

The impact of age on pension contributions

Figure 7 shows changes in pensions contributions broken down by age. Under all scenarios the highest impact on contributions is seen among 40-54 year olds. This is particularly true of the Employer Match scenario where contributions among this age group increase by up to £17 per week. Examining this group in more detail it is evident that, once again, high earners are likely to do most of the additional saving.

¹⁵ Average change across the whole population, divided by lifetime equivalised income

Figure 7. Change in private pension contributions by age¹⁶

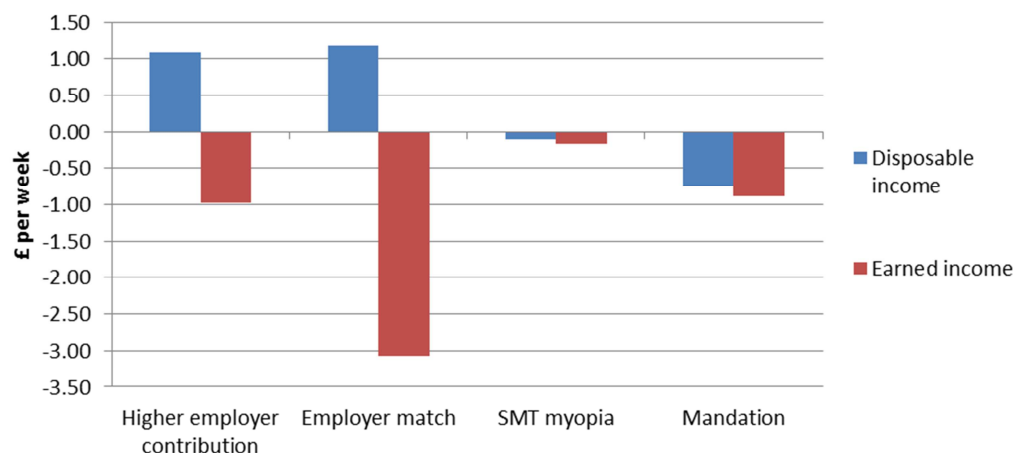


Change in income

Disposable income shows how much money people have to live by, and so is an important aspect to consider. It is, of course, important to consider this over the entire life course – not just before or after State Pension age – therefore we do this here. References to this section are repeated in Chapter 5.

Figure 8 shows the absolute change in both net disposable income and earned income. The most noticeable impact on net disposable income is the fall seen under the Mandation Scenario. This is primarily because lower earners in employment are now forced to save. As they have limited means available to them they are forced to sacrifice disposable income in order to make the mandatory pension contributions. **Figure 8** shows an overall drop in disposable income when equivalised across the life course.

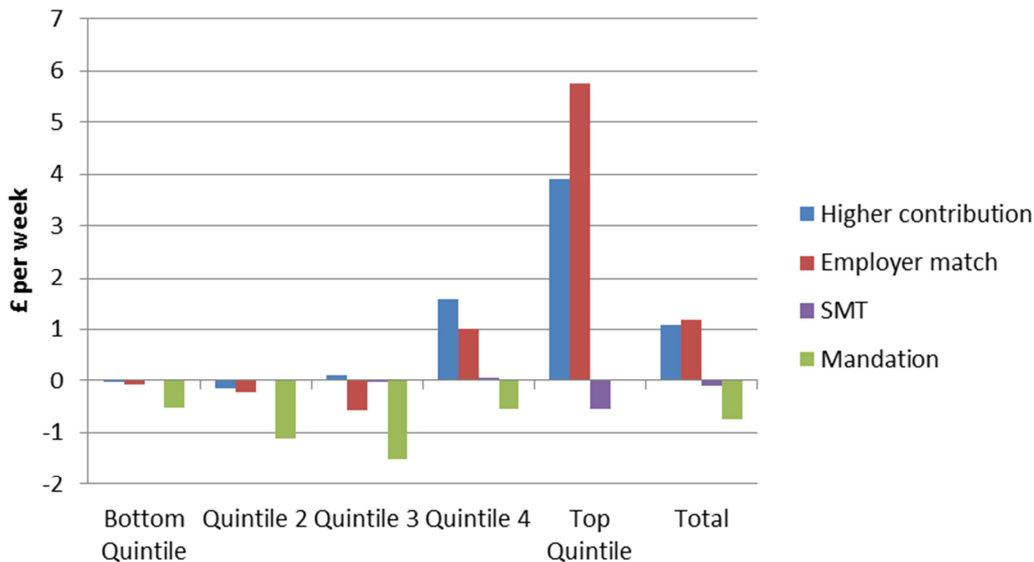
Figure 8. Change in net disposable and earned income by scenario¹⁷



¹⁶ Equivalised average change

¹⁷ Average lifetime equivalised impact, across whole population

Figure 9. Changes to net disposable income ¹⁸



It is particularly difficult to incentivise lower earners to save as they are constrained by their need to use income for consumption in the present, while the State Pension and other welfare benefits are more likely to provide a safety net for this group once they are past SPA.

Mandatory contributions have significant implications for the bottom two income quintiles' standard of living while under State Pension age, as well as the wider economy as consumption would be reduced.

Lower disposable income more than offsets any increases in post-SPA income under the Mandation scenario, whereas the opposite is true for the Higher Employer Contributions and Employer Match scenarios.

The large overall fall that can be seen for earned income under the Employer Match scenario can be mainly attributed to higher earners, who are now paying more into their private pensions.

The change in net disposable income for different income groups

Looking at the impact on disposable income – the amount available for spending – by income level, we can see the effect of the Mandation scenario even more clearly. There is a distinct drop among all but the highest earners (top quintile), who register a negligible overall effect.

¹⁸ Lifetime equalised changes, by income quintile

However, the impact is limited. Even the biggest drop among quintile 3 totals only £1.51 per week, and **Figure 8** shows that the overall net effect across all ages and income groups is a drop of only 75 pence per week.

For bottom two quintiles, all scenarios have a net negative impact on disposable income when it is equivalised over the lifetime. For these groups, while people are in employment an employer contribution is also only available over a small band of earnings (over £5,668¹⁹) and so even a significant hike in the headline employer contribution may offer limited financial gain in practice once losses from other sources of income (lifetime equivalised) are taken into account.

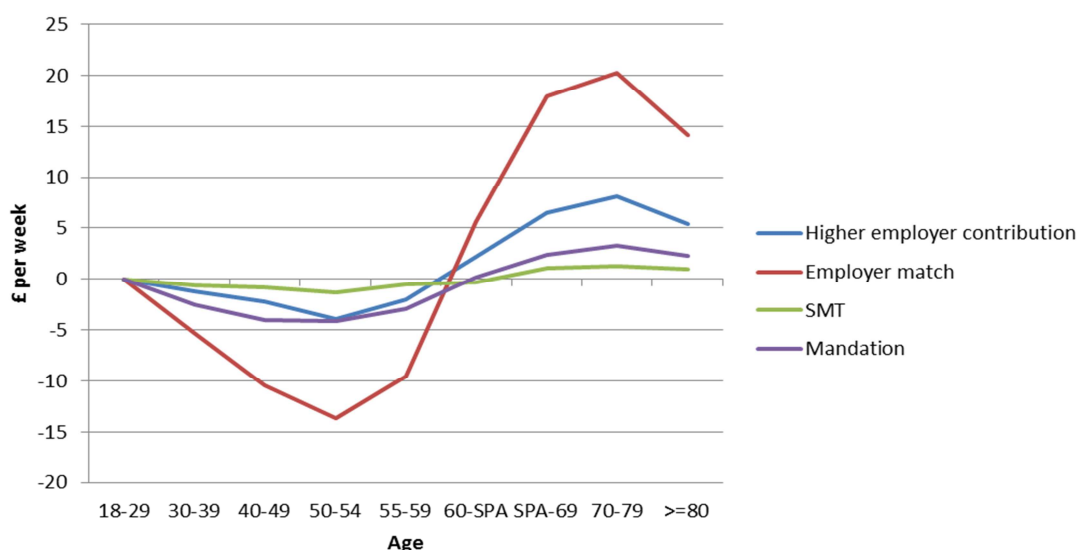
For the middle quintile only the Higher Employer Contributions scenario registers a slight positive effect. Interestingly, given the changes in take-up (even among low to middle incomes), the Employer Match scenario has an overall negative impact on quintile 3. This in particular, along with Higher Employer Contribution, appears to have a regressive effect.

Changes in disposable income

Figure 10 shows the changes in disposable income by age, across the four main scenarios.

All four scenarios result in pensioners having a higher overall disposable income. However, for those under SPA it is consistently lower, partly due to the fact that these individuals are now contributing, or contributing more, to a pension. The positive effects of saving seen later in life are likely to be skewed towards higher earners.

Figure 10. Change in disposable income by age for each scenario²⁰



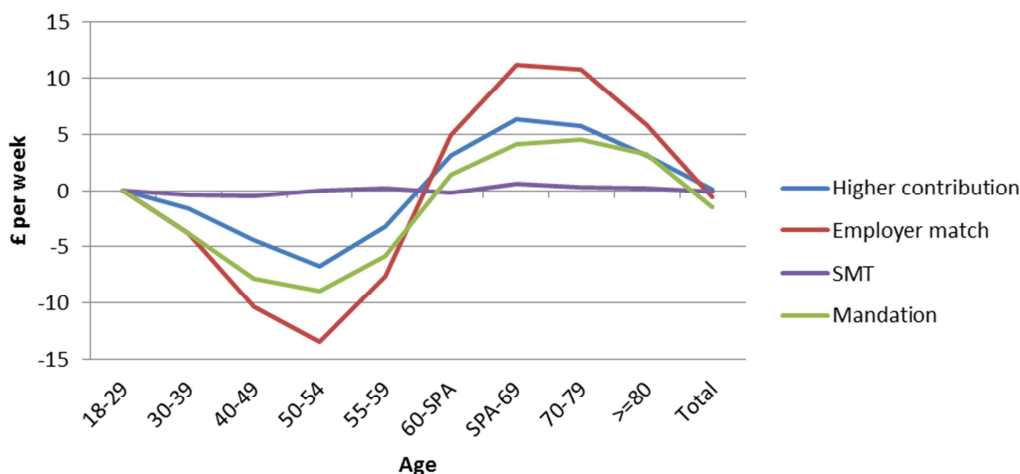
The middle earning group is almost entirely in employment, yet appears on the whole to be less responsive to incentives than higher income groups. It therefore warrants further scrutiny.

¹⁹ In tax-year 2013/14

²⁰ Equivalised average change

Figure 11 compares quintile 3 by age. It appears the drop in disposable income when under SPA is proportionately greater relative to the post-SPA gains for the middle quintile than for higher income groups. All scenarios generate a net loss over a lifetime for this group, except the Higher Employer Contributions Scenario, which shows a marginal gain of 11 pence per week.

Figure 11. Change in disposable income for quintile three by age²¹



Over their lifetime, the middle quintile suffers a net loss of income in all but the Higher Employer Contributions Scenario. This is largely because of the withdrawal of state welfare benefits as private saving increases – this issue needs to be addressed to remove barriers to saving.

Impact on labour supply

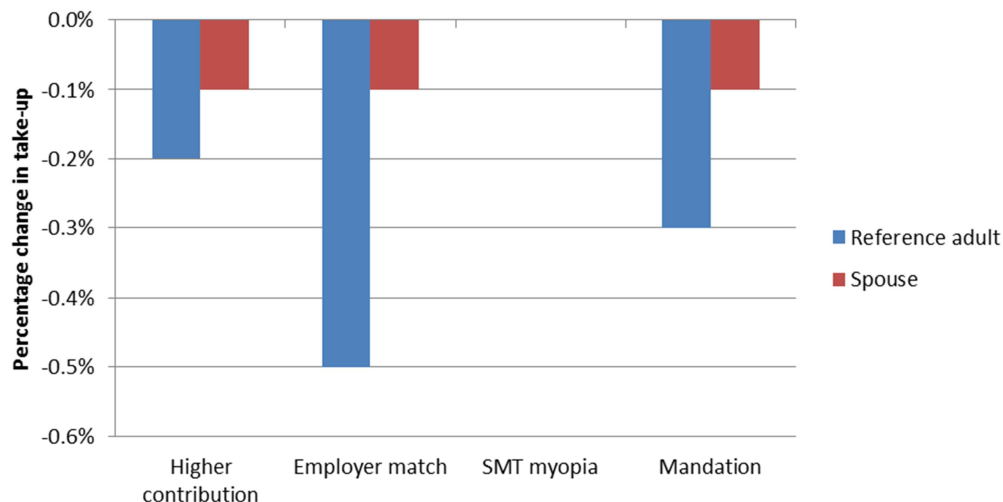
The four scenarios tend to have a small negative effect on labour supply for a number of reasons. Some people are encouraged to stop work earlier, perhaps by being encouraged to retire sooner than they otherwise would have because of increased pension savings. In the case of mandation, the negative impact on individuals' disposable income makes it less worthwhile for people to remain in employment under SPA.

However, as the charts below show the effect is marginal. The older member of the household (the Reference Adult) is more likely to stop working, with the greatest effect being seen under the Employer Match scenario (-0.5%).

The Save More Tomorrow scenario registers no impact for either the reference adult or their spouse, and the impact on spouses across the other scenarios is likewise very small.

²¹ Equivalised income across population

Figure 12. Change in employment status under each scenario ²²



When looking at different income groups (**Figure 13**), again only the Employer Match scenario registers a significant result. For the two highest earning groups, the drop in employment is over one per cent. The Higher Employer Contributions scenario also shows a larger impact on higher earners, albeit to a lesser extent.

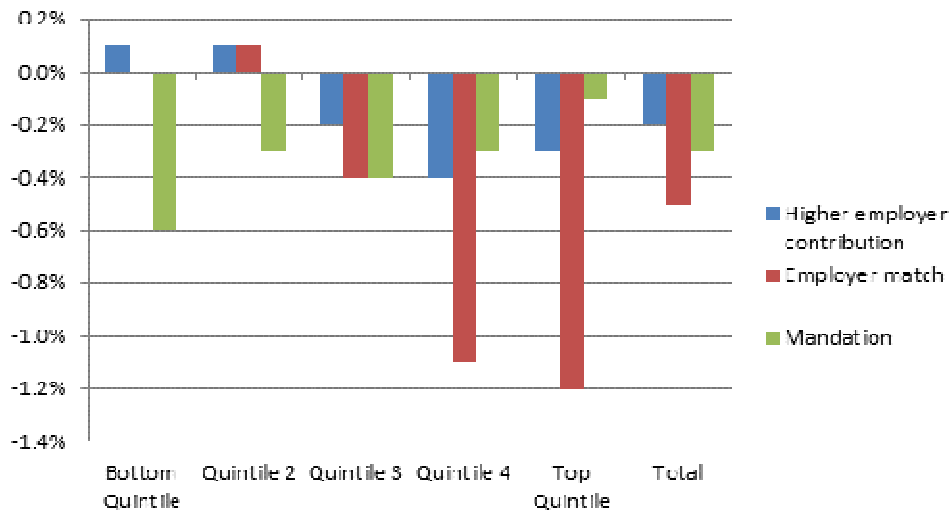
The Mandation scenario has the greatest impact on the bottom quintile (-0.6%). Because many in the lowest income group are unemployed, as a proportion of people in work this is likely to be more significant, demonstrating that work becomes less worthwhile as disposable income is cut.

There are some signs that mandating or incentivising pension saving may have some effect, albeit limited on number of people remaining in the workforce. This suggests that some measures to promote extended working lives may be necessary to accompany any changes to private pension contributions.

In spite of the limited impact on overall employment rates, the results do hint at the potential importance for employers of using pension scheme as a workforce management tool.

²² Average change across entire population

Figure 13. Change in employment status by income under each scenario²³



Conclusion

Low to middle income groups in particular face a fundamental barrier to increasing saving today. They find themselves unable to respond to incentives, in spite of being mostly in employment because they cannot afford a decrease in their present disposable income. Higher earners invariably benefit the most from the changes to incentives modelled in this discussion paper.

The Employer Match scenario offers the best overall return, and has some effect in incentivising lower earners to save. However, the benefits remain heavily skewed towards higher earners. Even those in quintile 3 suffer a net loss over the course of their lives, with the gains going entirely to the top 40% in the income distribution. Only the Higher Employer Contribution scenario delivers a net positive return for the middle income group.

The punitive costs of the Mandation scenario would have implications for the bottom two income quintile's standard of living while under SPA, and would also certainly lead to lower consumption among younger people who are in work. Moreover, the reduced disposable income while they are working would not be fully compensated by higher disposable income post-SPA.

On a more positive note, under the conditions set by the model, all the scenarios result in significantly fewer people opting out of automatic enrolment schemes than would be expected at the current maximum level of statutory contributions. Albeit, it must be remembered that the model makes no allowance for the behavioural inertia that could see opt out rates remain low for other reasons.

²³ Average change by income quintile

There is a small negative effect on labour supply arising from all the scenarios modelled. This is most significant among higher earners under the Employer Match scenario, perhaps unsurprising as that is where the most substantial increases in take-up occur.

Chapter 5 – Pensioner Impact

In the previous chapter we mainly looked at the impact of the scenarios on people before they reach SPA. Next we will consider the impact of savings decisions under the four main scenarios after on pensioners. The impact of the scenarios on disposable income is relevant to both and is considered here as well.

For the middle quintile and below, every pound saved into a private pension has a greater impact on their ability to consume than for higher earners, and hence a more significant affect impact on their standard of living. However, whether this additional pension saving is worthwhile depends on the return generated in retirement, as well as the wider implications of reduced spending of younger savers on the wider economy.

As we have seen, it is difficult to incentivise lower earners to save into a private pension, even where more generous incentives are on offer, while for higher earners the opposite is true.

Pensioner incomes

We previously considered disposable income over a person's lifetime. In this chapter we will consider disposable income again, but only inasmuch as it affects retirement income.

State Pension income

None of the four scenarios modelled deliver a significant impact on State Pension income. No income group sees more than a few pence difference each week. The middle quintile loses out marginally in three of the four scenarios, whereas those higher earners in quintile four gain the most, but by a negligible amount.

Private pension income

Each of the scenarios shows, unsurprisingly, a net increase in income from private pensions. The Employer Match scenario delivers the highest overall return at nearly £12 per week, with the Higher Employer Contributions returning around £5.

Figure 14. Overall change in private pension income²⁴



Figure 15. Overall change in private pension income by income band²⁵

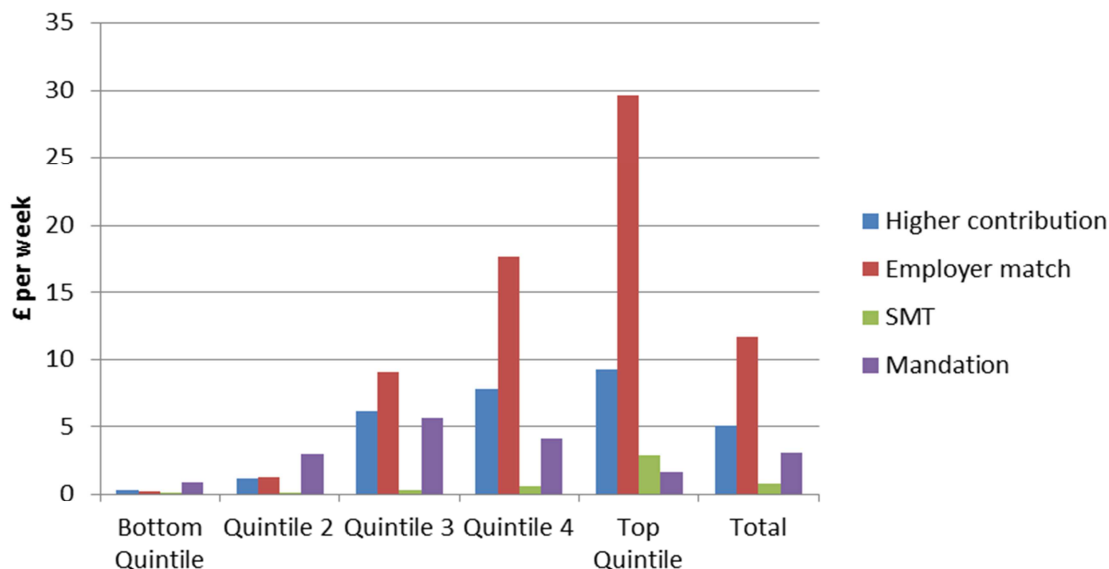


Figure 15 shows that the total increase under the Employer Match scenario, however, comes mainly from higher earners. For the bottom 40% there is virtually no increase in pension income, while for quintile 3 the increase is approaching £10, much less than for quintiles four (£17.61 pw) and five (£29.63 pw). This corroborates the charts in Chapter 4 on disposable income, that most of the benefit is seen by the top 40 per cent of earners.

These increases must be set against the backdrop of reduced disposable income for people under SPA, as shown **Figure 10** in Chapter 4.

The Higher Employer Contributions scenario shows a more moderate increase in private pension income for all income groups, but one that is less skewed in favour of higher earners and causes less of a decrease in disposable income to people under SPA.

²⁴ Average change across whole population

²⁵ Average lifetime equivalised change, by income quintile

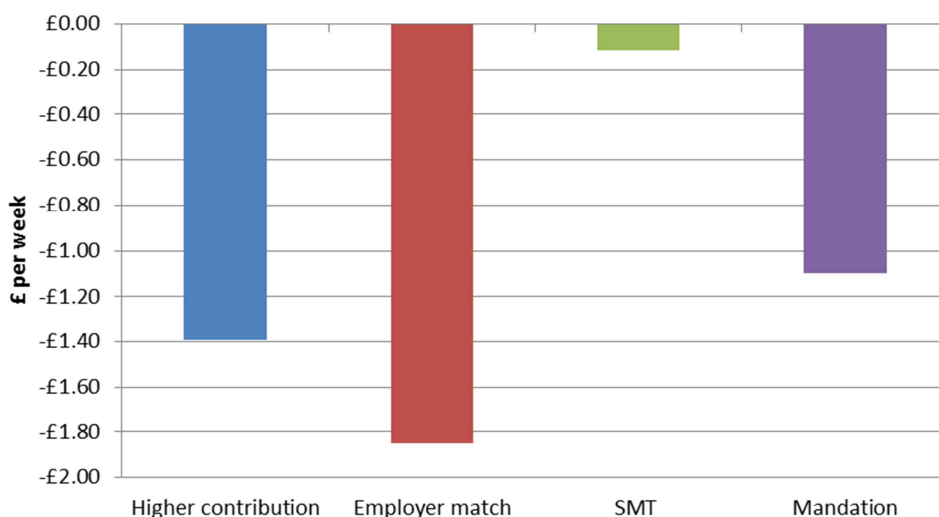
Meanwhile mandating people into a pension also leads to limited improvements in retirement income – peaking at over £5 per week among the middle income group – but it has a negative impact over an entire lifetime.

Welfare benefits

Higher private pension incomes have the potential to lead to a reduction in entitlement to state support outside of the STP.

As expected all four scenarios deliver a net reduction in non-State Pension welfare benefits received over a lifetime. This is broadly in proportion to the total gains in private pension seen in the previous section. The risk, therefore, is that it makes no sense for people to save more personally if they will lose out on state welfare benefit as a result.

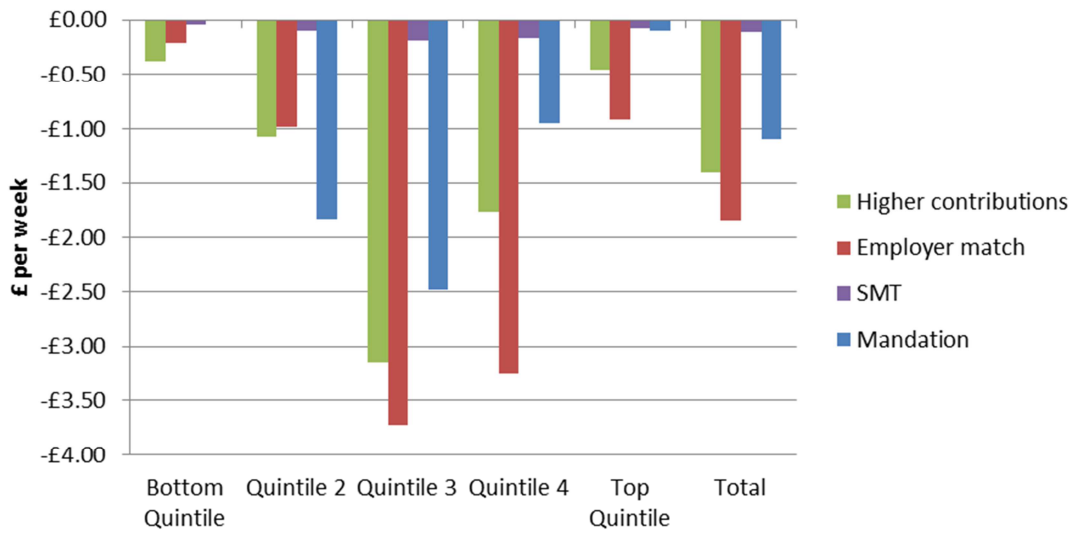
Figure 16. Total change in state welfare benefits received²⁶



One striking difference in the analysis of benefits by income is that under all four scenarios those in quintile three lose out the most. This loss is not matched by the gains from other income sources and implies that there is little overall financial benefit to private pension saving for these people, when equalised over their lifetimes. The additional contributions made do not translate into a higher level of disposable income overall, as shown by **Figure 10 and Figure 11** in the previous chapter.

²⁶ Average lifetime equalised change across whole population

Figure 17. Total changes to state welfare benefits by income²⁷

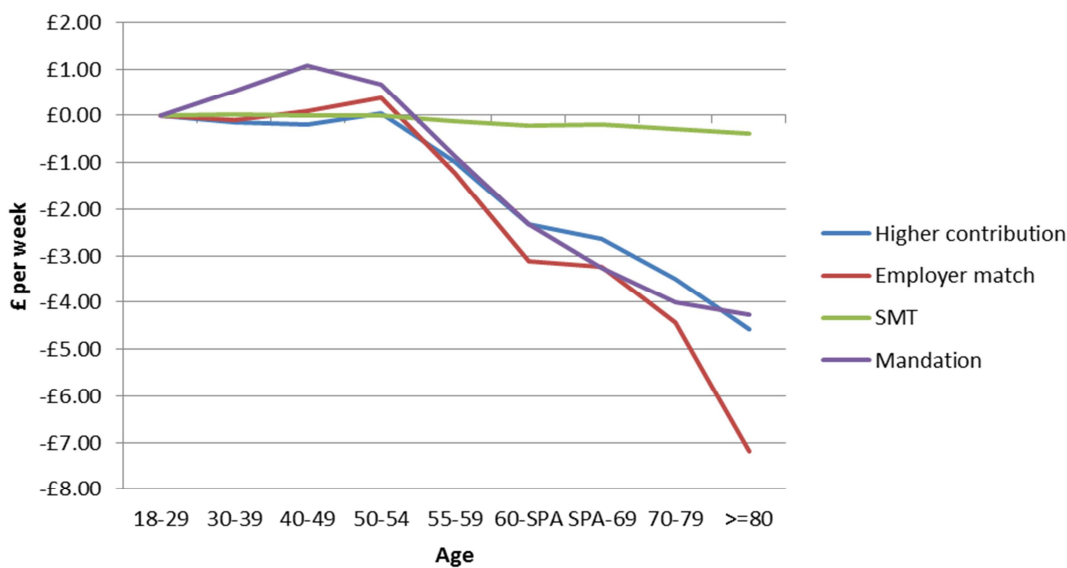


Policy makers will be interested in evaluating the cost of welfare benefits and savers could be served by having control over their outcomes by saving into a pension rather than relying on uncertain future welfare benefit payments. However, the Government will need to ensure that savers do not lose out financially by taking responsibility for their own pension income.

Once in retirement, the middle quintile loses significant amounts of welfare support as a result of saving into a pension. This suggests that, in order to incentivise people in this band to save, reform to the benefits or tax system will be needed to ensure they do not lose out overall.

Figure 17 also reinforces the notion that the Employer Match scenario would be regressive, and would do little to benefit those in greatest need.

Figure 18. Change in state welfare benefits received by age²⁸



²⁷ Lifetime equivalised change by income quintile

²⁸ Average impact across whole population

When viewing the impact on welfare benefits by age (**Figure 18**), it is evident that people see the sharpest reduction later in life. While people under working age see a slight increase in benefits received, pensioners lose out. The net loss is therefore concentrated among older people, in particular the very old, and the real impact of this would need to be considered in detail before such policies were adopted.

Under the Mandation scenario people below the age of 55 realise the biggest increase in welfare benefits. However, as this is likely to be because of the reduction in disposable income this is not necessarily a positive change for the individual or the Government, as more people may become in-work benefit claimants as a result.

Once past SPA, however, the Mandation scenario does deliver a net positive return. However this among the low to middle income cohort (quintiles 2 and 3): people that have likely worked through most of their lives yet never had access to, or earned enough, to benefit from more generous employer schemes.

Overall effect on pensioner income

The scenarios have varying effects on overall income. As we saw in Chapter 4, total disposable income over a lifetime is reduced under the Mandation and Save More Tomorrow scenarios, while it increases under the Employer Matching scenario and the Higher Employer Contribution scenario.

Among pensioners, however, all scenarios deliver a higher income in retirement. This is explained by the increase in private pension income, which results from higher saving rates. Consequently when looking only at the impact after SPA, there is a net transfer away from welfare benefits towards private income, with a net positive effect on disposable income for pensioners of all ages.

It is important to bear in mind that these effects vary between income groups. Under all scenarios, it appears difficult to significantly improve incomes for the bottom two income quintiles of pensioners – the realised benefits from higher pension saving are focussed primarily on the top two income bands, with the middle quintile also being able to respond to additional incentives, though to a lesser degree.

However, each scenario must be looked at in the round, including the effect on incomes and wealth, and viewed independently. All aspects need to be drawn together in order to reach a conclusion on their impact. It is not enough to simply state that higher pensioner incomes justify the impact on people pre-SPA; or conversely that reduced disposable income below SPA is not a price worth paying for reducing pensioner poverty.

Wealth

The modelling also looked at the impact on wealth, in the form of aggregate household wealth and the value of individuals' pension pots. Both these have implications for the annuities market and for potential alternative resources in retirement.

Figure 19. Change in aggregate net household worth and total value of pension pot²⁹



Figure 19 looks at the change in aggregate household worth and the total value of people's pension pots. Both follow similar patterns, with only marginal differences. That the change in the value of pension pots exceeds that of the aggregate net worth suggests a slight decline in wealth from other sources, possibly because of money transferred into pension saving when under SPA.

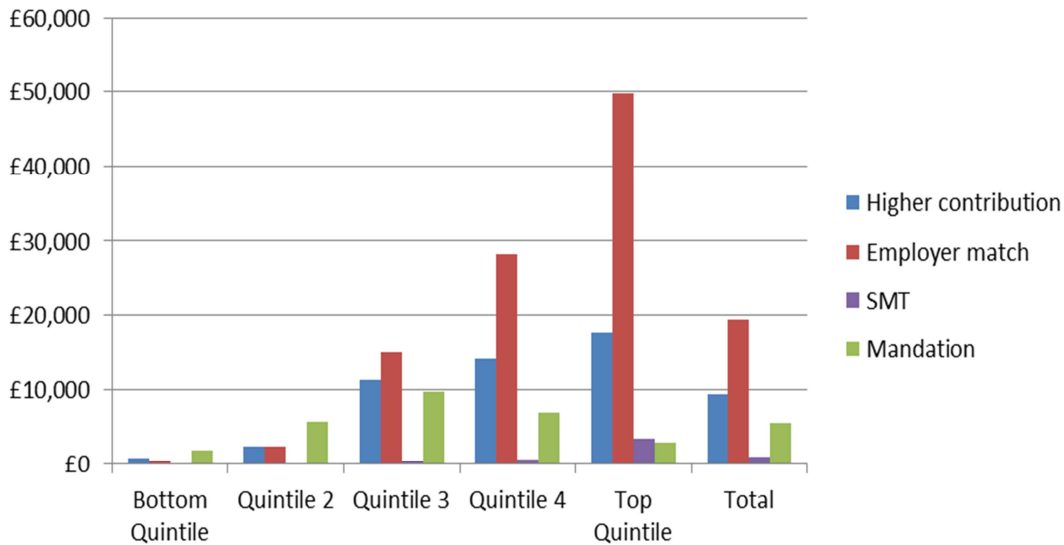
It appears, similar to other scenarios, that Employer Match delivers the greatest return, with Higher Employer contributions also improving individual's wealth on average by around £10,000.

Figure 20 gives an income quintile breakdown of the change in aggregate household wealth. This pattern mirrors the results for income, whereby the gains delivered by the Employer Match scenario appear regressive, and the Higher Employer Contributions scenario is also regressive, but more evenly spread among the three highest earning quintiles.

Interestingly the middle quintile is the primary beneficiary under 'mandation', suggesting that as a means of increasing wealth among middle income groups it could be effective, if this was the overriding policy objective.

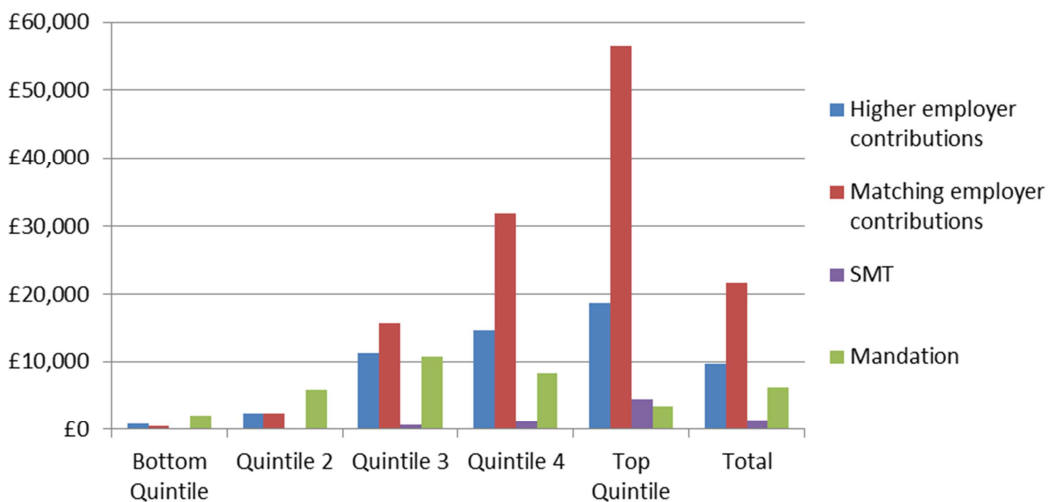
²⁹ Average change among whole population

Figure 20. Change in aggregate net household worth by income³⁰



The pattern is similar when looking at the total value of individuals' pension pots, as shown in **Figure 21**.

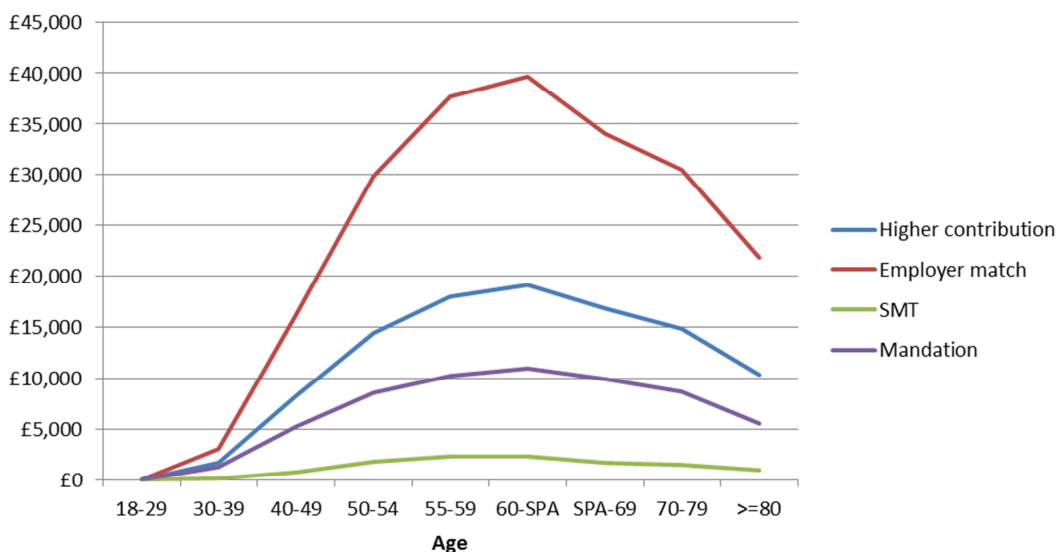
Figure 21. Change in total value of private pension pot, by income quintile³¹



³⁰ Lifetime equivalised change across whole population

³¹ Lifetime equivalised change

Figure 22. Change in aggregate household net worth by age³²



The peak increase in wealth is unsurprisingly between 60 and SPA, reflecting the point of retirement for the majority of people. There is no point in the life course at which total wealth declines – the increase in pension saving at all times more than offsets decreases in spending.

Conclusion

Each of the scenarios delivers a positive impact on both private pension income and net disposable income in retirement. However, this increase must be viewed in the context of reductions in income before SPA. The most balanced increase appears to come from the Higher Employer Contribution scenario, as it avoids reduced disposable income for people in employment, while generating favourable returns in retirement that are also less skewed in favour of higher earners.

People in the middle income group continue to show limited gain by saving into a private pension as they lose significant amounts of welfare support if they save more. This suggests that, in order to incentivise people in this band to save, reform to the benefits or tax system will be needed to ensure they do not lose out if they work and save.

³² Impact on overall population by age

Chapter 6 – Lowering the statutory employee contribution

Each of our scenarios has illustrated that it is very difficult to encourage those on the lowest earning to save. To explore whether this problem could be overcome, in this final chapter we consider what might happen to pension saving if the statutory minimum employee contribution were lowered from 5 to 3 per cent, while keeping the overall contribution at 8 per cent. The results are shown as the difference between the two options.

Scheme	Employee contribution rate (including 1 per cent tax relief)	New employee contribution (including 1 per cent tax relief)	Baseline total contribution	New total contribution
Auto enrolment statutory minimum contributions	5%	3%	8%	8%

The results in some areas are striking, and it appears that lowering the statutory minimum employee contributions removes a significant barrier to pension saving for many individuals.

Take up of private pension saving

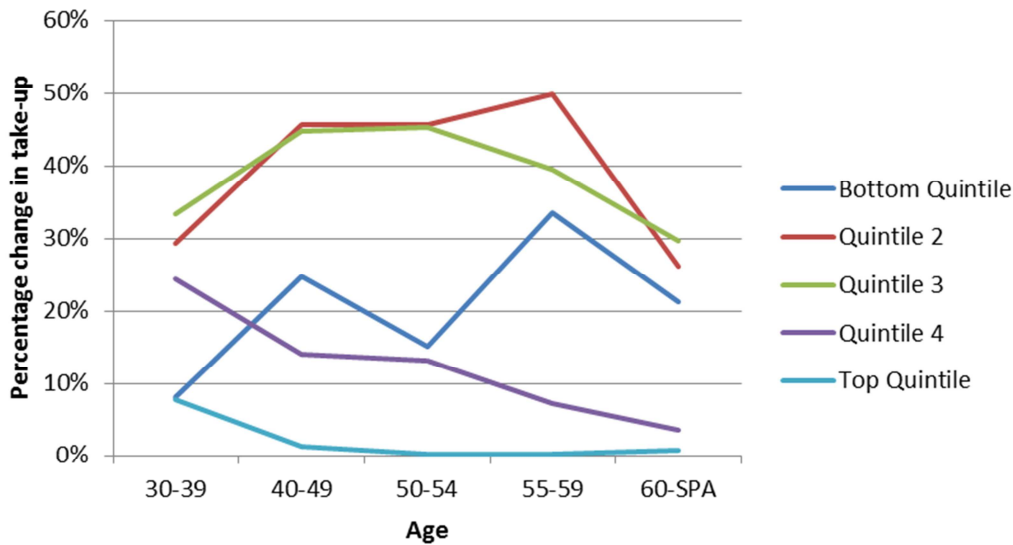
Figure Figure 23 shows an interesting impact on the change in take-up. Quintiles two and three are considerably more likely to pay into a private pension, with up to 50 per cent more people saving than in the original scenario once the individual contribution falls from 5% to 3%.

This suggests that if the current success of automatic enrolment is not maintained as the contributions are phased upwards, then lowering the minimum threshold for employee contributions could reap significant benefits.

This scenario assumes the overall contribution rate remains at 8%. The higher employer, or governmental, contribution level may also help incentivise people to save, but given findings elsewhere in the model it is likely that the primary barrier for middle and lower earners is the unaffordability of making contributions at the higher level.

It should be noted that the model may underestimate the success of automatic enrolment because it assumes an entry-level saving at 5 per cent, whereas in reality the incremental approach in the early years will help to gradually engage many more people.

Figure 23. Change in take up of private pension scheme saving

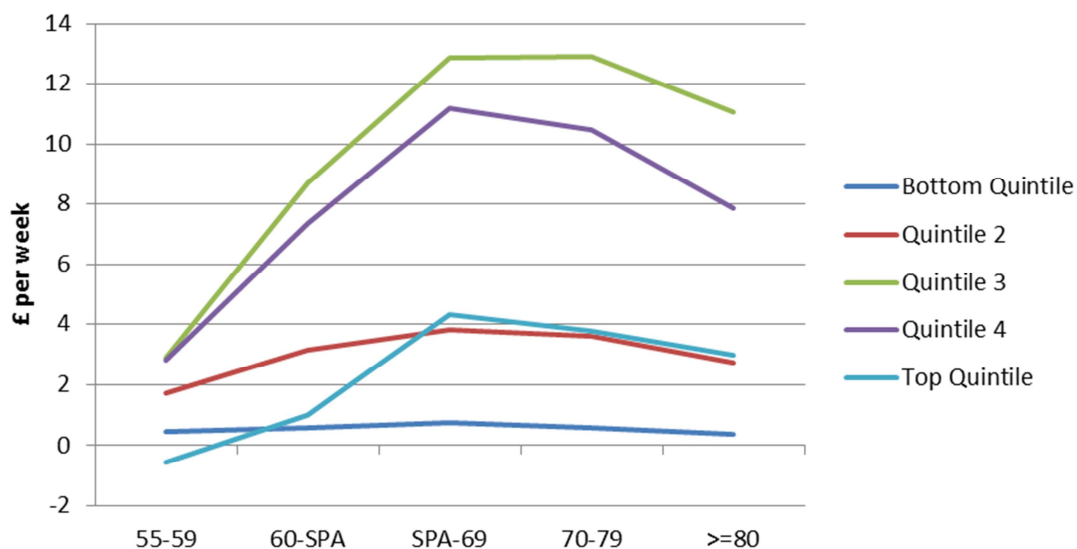


Private pension income

The change in take-up results in a corresponding rise in income from private pensions. People in quintile three are the main beneficiaries. Higher earners in quintile four also experience significantly better outcomes in spite of the more limited impact on take-up shown in **Figure 23**.

In spite of the improvements in take-up, which is in itself a desirable outcome, the lower earners in quintiles one and two do not receive an equivalent rise in income.

Figure 24. Change in private pension income



Welfare benefits

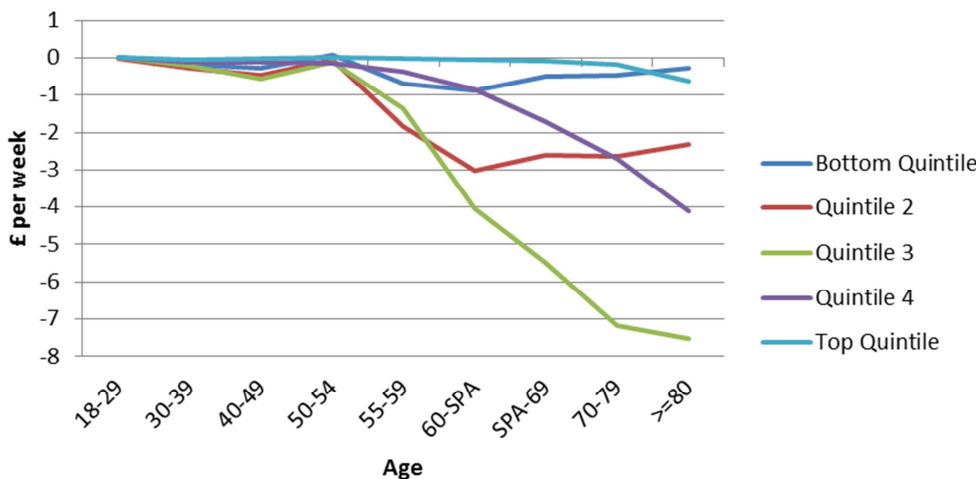
However, the flipside of increased saving is that higher income from private pensions in retirement appears to correlate with receipt of lower amounts in state benefits (other than the Single Tier Pension,

which is the baseline scenario, so for example Housing Benefit or Council Tax Benefit are likely to decrease). The larger the increase in private pension income the larger the corresponding fall in benefits received.

While no group loses the entire value of their private income increases in state benefits, it is clear that there is a strong disincentive to save, particularly for the middle quintile but also those on lower incomes.

This poses a problem because the individuals in quintiles two and three, who are largely in employment, have the potential to save but at present do not. Furthermore, it is clear that it is possible to stimulate people to save with the right incentives. However, if people are penalised in respect to benefits received later in life, then it will provide a block to such behaviour.

Figure 25. Change in state welfare benefits received



Disposable income

Quintiles three and four have noticeably higher post-SPA disposable incomes under this new scenario. However, this good news is mitigated by the withdrawal of benefits from quintile three, meaning outcomes are not as good as they could be.

Figure 27 shows that over a whole lifetime, including pre- and post-SPA income – people in quintile three derive only a slight benefit. Once again, most of the increase to disposable income is experienced by higher earners, probably because of the more generous pension schemes into which people would be auto-enrolled, and the cost to people under SPA of making additional contributions.

Those in quintile two on lower incomes derive hardly any benefit post-retirement and over their lifetime they experience loss of income. This suggests that the disincentives to save previously mentioned are likely to be particularly strong for this group.

It would potentially need other policy changes, especially around welfare benefits, to deliver better outcomes for people on lower and middle incomes.

Figure 26. Change in disposable income

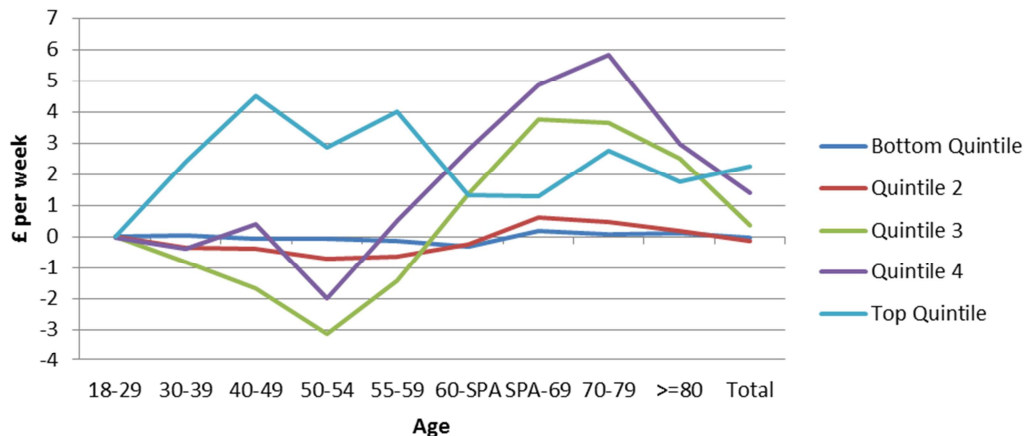
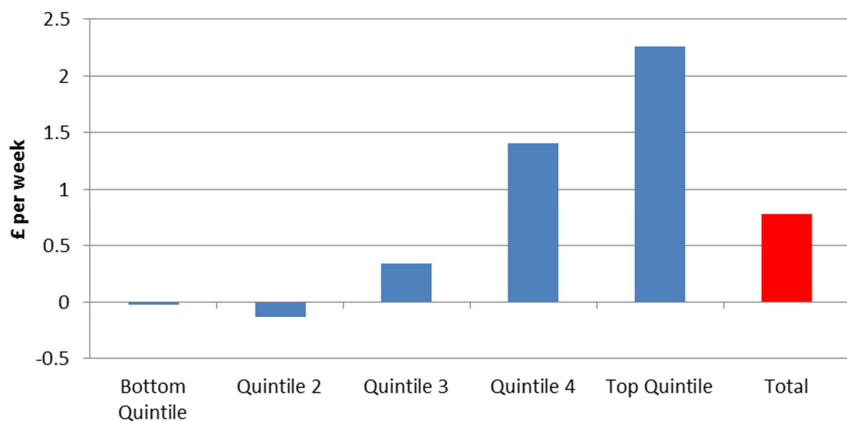


Figure 27. Change in disposable income by income quintile



Conclusion

It is clear that lowering the minimum contribution rate can have a significant effect on engaging lower earners in pension saving. This indicates that it is the higher employee minimum contribution rate that is likely to be the biggest barrier to making automatic enrolment a resounding success should out rates increase.

Conclusion

The findings of this research show that it is possible to encourage people to save more into their private pension by offering them incentives to do so. However, savers in the bottom two earning quintiles face strong barriers to saving into a workplace pension at the minimum levels required under automatic enrolment. Policy makers will need to be prepared to address this should the increase in contributions lead to a rise in opt-out rates from current low levels. Our modelling indicates that one option should this occur may be to reduce the statutory contribution level for the lowest earning employees from 5% (including tax relief) to 3%, possibly combined with another additional incentive.

Those in the middle quintile face a different difficulty. This group will see a drop in their net disposable income once the basic state pension is introduced that they will need to fill by additional private saving for retirement. Whilst this group is responsive to incentives to save, most notably to employer matching, they have little to gain at the moment by doing so as they lose a significant amount of non-pension state benefit, such as housing benefit, post retirement as a result. If policymakers want this group to take responsibility for their own income levels in retirement they will need to ensure the welfare and tax system adequately ensures it is financially worthwhile for them to do so.

Those on highest incomes consistently benefit most from incentives to save. They are the group most financially able to switch expenditure into saving without feeling any reduction in their standard of living. Each of the incentives in the discussion paper benefited the highest earners most, although it may be possible to incentivise this group in a way that more evenly distributes the benefit across the income distribution.

Annex A: Method

This discussion paper uses the National Institute of Social and Economic Research's LINDA model to simulate different scenarios, each demonstrating the wider impact of changing savings behaviour. The LINDA model is based on NIBAX, a model that simulated the lifecycle of a cohort of individuals aged 22-30 in 2006. The development of NIBAX was funded by a number of organisations, including the Department for Work and Pensions, HM Revenue & Customs, and its development to LINDA by HM Treasury.

LINDA is a dynamic programming model of household sector savings and labour supply decisions that has been developed to make current best practice economic methods of analysis available to UK policy makers. The decision unit of the model is the benefit unit, defined as a single adult or partner couple and their dependent children. LINDA considers the evolving circumstances of a sample of reference adults and their benefit units, organised into annual snap-shots during the life-course. Decisions regarding consumption, labour supply, and pension scheme participation are endogenous, and are assumed to be made to maximise expected lifetime utility, given a benefit unit's prevailing circumstances, its preference relation, and beliefs regarding the future.

LINDA is designed to evaluate the impact of a changing economic environment on household circumstances of a representative population cross-section. The "economic environment" is defined broadly here so that it includes (but is not limited to) tax and benefits policy, childcare arrangements, housing costs, labour market regulation, the pensions framework, and returns to education. The model is designed so that behaviour responds endogenously to policy change, in a way that takes into account the sorts of uncertainties that people actually face.

Model projections start from a reference database that has been extracted from the Wealth and Assets Survey (WAS), referencing observations collected between July 2006 and June 2007. These data are designed to reflect the population cross-section of Great Britain, and the weights have been adapted to reflect the population cross-section of the UK. Furthermore, the parameters of the model have been set to reflect data for the UK, primarily on the basis of data reported by the Living Costs and Food Survey (and its forerunners) during the period from 1978 to 2010.

Further details on the LINDA model are available at www.niesr.ac.uk

The analysis presented in this discussion paper focuses on a simulated cohort of individuals aged 22-30 in 2006. The simulations age the 2006 cross-section forwards, with the 2006 tax and benefit structure (suitably updated, and incorporating the Single Tier Pension where appropriate) covering the period from 2006 to 2013. In 2013 the tax parameters switch to the 2013/14 tax and benefit structure, including universal credit for all working age individuals (while the previous benefits system remains in place for pensioners).

The analysis specifically looks at the net result of behavioural changes resulting from altering saving incentives, and the optimisation of household behaviour and facilitates the exploration of the effects of

hypothetical policy changes on saving levels into a private pension.

The impacts of possible policy changes are reviewed by key economic and demographic parameters at a given age including, earnings bracket and relationship status and lifetime disposable income. The effect of each scenario on various outcomes such as pension scheme participation, saving and overall wealth is also taken into account.

The baseline

The baseline analysis assumes three typical types of pension:

- Type 1 which aims to replicate the features of NEST/auto-enrolment
- Type 2 which aims to replicate the offer of DC schemes;
- Type 3 which replicates DB schemes.

These are modelled using following fixed employee and employer contributions rate (drawn from a combination of the on the Annual Survey of Hours and Earnings and the NAPF Annual Survey).

Table 1

Scheme		Employee Contribution rate	Employer Contribution rate
Type 1	Automatic enrolment contribution level	5%	3%
Type 2	Contractual Defined Contribution scheme	5%	9%
Type 3	Defined Benefit scheme	6%	17%

Pension participation assumptions

The analysis assigns people into a particular pension ‘type’ based on earnings, along the lines set out in Table 2. Whenever an individual changes job in the model they are reassigned to a new pension scheme. Individuals are considered to be free to choose whether or not to participate in their available pension in each year. There is no assumption of automatic enrolment or any behavioural inertia that could increase the likelihood of pension saving. Individuals who choose not to contribute to their pension in any given year forego any employer pension contributions that they were entitled to during that year.

The probability of being a member of a Type 3 (pseudo DB scheme) increases with earnings, with 45% of those earning over £31,200 likely to be saving into such a pension, compared to 20% of those earning between £7552 and £15,600. These data assume that an individual can only be eligible for one scheme at a time.

Table 2

Earnings (percentiles of earning distribution)		None	Type 1	Type 2	Type 3
Income	Approximate percentile				
£0 - £7552	0 – 10/15	100%	0%	0%	0%
£7552-£15600	10/15 – 35	0%	65%	15%	20%
£15600-£31200	35 – 75	0%	50%	20%	30%
£31200+	75 – 100	0%	25%	30%	45%

Those on the lowest earnings are assumed to not have any form of private pension provision at all. These individuals tend to be those in the bottom quintile of the lifetime income distribution, which captures individuals relying predominantly on state support for most of their life. State support also represents a significant proportion of the income of the second lifetime income quintile. The result of this is that the bottom two quintiles will have little or no private pension income once they retire.

Participation rates in a Type 1 scheme (typical automatic enrolment) for people in their 40s and 50s is below 50%. However it approaches 90% for Type 2 (Defined Contribution with above minimum statutory contribution and Defined Benefit) schemes.

A number of factors may account for this:

- Savers into DC and DB schemes are receiving significantly higher employer contributions than those saving into AE schemes. Consequently they are more likely to be attractive to the employee.
- Those on higher earnings are far more likely to be eligible for a DC or a DB scheme. Combining this with the fact that higher earners have greater saving potential, it is to be expected that participation rates in DC and DB schemes would be higher than in AE.

Chapter 3 assesses the impact of the state pension reform including the introduction of the single tier pension and illustrates that impact the policy change will have compared to the existing baseline.

Under current legislation State Pension age for women will increase to 65 by 6 November 2018, bringing them in line with men. The State Pension Age (SPA) for men and women will then increase to 67 by 2034.

The Government has proposed to introduce a flat rate (single-tier) State Pension from April 2016. The revised 'Single tier pension system' is simulated on an identical basis to the baseline described above, with the exception of the treatment of State Pensions. The Single Tier Pension is assumed to replace the BSP and S2P from 2013. The assumption that the STP comes into effect a few years before planned is a modelling simplification that is likely to influence the timing of behavioural effects, rather than their qualitative form.

In modelling the Single Tier Pension (STP), the modelling makes the following assumptions:

- the number of National Insurance Contribution years required to qualify for the full STP is set to 35 (c.f. 30 for the BSP).
- a minimum of 7 years National Insurance Contributions is required to qualify for any STP (c.f. 0 for the BSP).
- the full STP is set to £144 per week for a single person in 2010 prices (c.f. £97.65 for the BSP).
- the STP omits any couples premium, so that a couple with one full NIC history is assumed to receive the same amount as a single person with one full NIC history (£144 per week, c.f. £156.15 for the BSP).
- the savings credit is omitted from the analysis under the STP, so that all means-tested state retirement benefits are withdrawn at the rate of 100%.

The parameters used reflect the recent Green Paper³³ and have been defined in consultation with officials at DWP.

As the discussion paper is interested in commenting on how different policy impacts might alter behaviour over and above planned changes to policy and the single tier pension is due to be introduced in April 2016, the effects of all other simulations in the discussion paper are compared to the single tier pension scenario outlined in Chapter 2.

Throughout the discussion paper, the results are presented using lifetime 'equivalised income quintiles'. Equivalised incomes are calculated by converting the income level of a family to the equivalent level a single person living alone would need to have to experience the same level of welfare. All annual equivalised incomes to age 85 are averaged. Incomes above age 85 are excluded to avoid different longevity affecting a family's position in the income distribution. The quintiles are labelled from 1 to 5 with 1 representing the highest income group and 5 the lowest.

Unless otherwise stated all graphs included in the discussion paper reflect the results from all members of a particular quintile group, not just those eligible to join a pension scheme.

³³ A state pension for the 21st Century, DWP, 2011

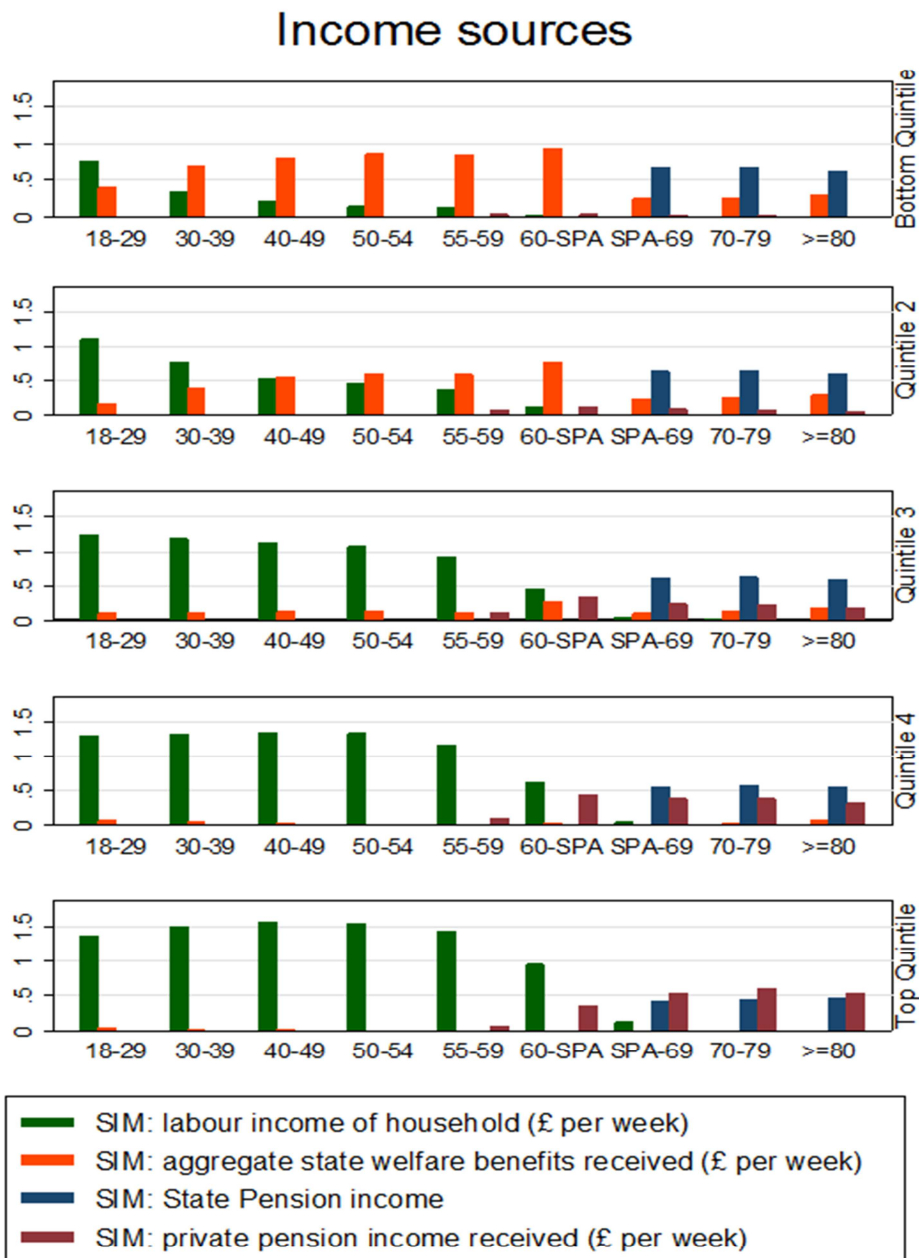
Additional modelling – what impact does a 5% contribution rate (instead of 3%) have on auto-enrolment?

As an alternative to mandate, we also used the LINDA model to consider the degree to which the automatic enrolment contribution rates in the baseline scenario (i.e. 5% employee (including 1% tax relief); 3% employer) created a barrier to joining a pension scheme.

Scheme	Employee contribution rate	New employee contribution	Baseline employer contribution	New employer contribution
Auto enrolment	5%	3%	3%	5%
Defined contribution	5%	5%	9%	9%
Defined benefit	6%	5%	17%	17%

Annex B: sources of income

The below chart shows the sources of income for each quintile across all age groups as a proportion of net income. It helps give an idea of who the typical people are within each. These are presented as a fraction of total net income (meaning gross earnings can be more than 100% of net income) in each week.



NOTES: Normalised to SIM: household net (disposable) income (£ per week)