



Institute
and Faculty
of Actuaries

State Pension age review

IFoA response to John Cridland CBE

August 2016

About the Institute and Faculty of Actuaries

The Institute and Faculty of Actuaries is the chartered professional body for actuaries in the United Kingdom. A rigorous examination system is supported by a programme of continuous professional development and a professional code of conduct supports high standards, reflecting the significant role of the Profession in society.

Actuaries' training is founded on mathematical and statistical techniques used in insurance, pension fund management and investment and then builds the management skills associated with the application of these techniques. The training includes the derivation and application of 'mortality tables' used to assess probabilities of death or survival. It also includes the financial mathematics of interest and risk associated with different investment vehicles – from simple deposits through to complex stock market derivatives.

Actuaries provide commercial, financial and prudential advice on the management of a business' assets and liabilities, especially where long term management and planning are critical to the success of any business venture. A majority of actuaries work for insurance companies or pension funds – either as their direct employees or in firms which undertake work on a consultancy basis – but they also advise individuals and offer comment on social and public interest issues. Members of the profession have a statutory role in the supervision of pension funds and life insurance companies as well as a statutory role to provide actuarial opinions for managing agents at Lloyd's.



Supplementary Report on State Pension Age

Introduction

In their work, members of the Institute and Faculty of Actuaries (IFoA) make significant use of the statistical analysis of historic data. We use this to make assumptions about the future course of events, especially in the financial and demographic fields. In doing so, we are mindful of the realities that:

- Past data may not necessarily be a good predictor of future experience;
- Concentrating on summary, aggregate or average results may mask significant variations within populations;
- External events, shocks or new developments can invalidate past analyses at quite short notice; and
- When making projections, assumptions often include some application of professional judgment.

We state these realities because the proposed regular reviews of the suitability of future State Pension Ages (SPAs) will rely on such statistical analyses and projections. As the projections look at least ten years into the future from each review date, it is important to understand potential limitations. We understand this is the rationale for regular reviews of SPA.

This supplementary report is the IFoA's submission to the State Pension Age Review led by Sir John Cridland. We also highlight the first report of the IFoA's State Pension Age Working Party. (SPAWP)¹ That report discussed various aspects of SPA in the UK. In particular, section 8 of the 2015 report noted some alternative approaches to, or additional changes alongside, future changes to a universal SPA. We have summarised some of these alternatives in this supplementary report.

When reviewing the suitability of alternative plans for future SPAs, it would be helpful to clearly decide on the purpose of the State Pension. We would offer two views that may influence the output of the review:

- Is the State Pension a safety net to ensure that all receive a minimum income designed to avoid pensioner poverty; or
- Is the State Pension a form of social insurance where the desired policy objective is to achieve a greater degree of perceived fairness between contributions from and payments to different population cohorts?

¹ <https://www.actuaries.org.uk/documents/sessional-paper-considerations-state-pensions-age-uk>

Fairness can take different definitions in this context. We could consider fairness between the benefits received by sub-groups of the population, but also consider fairness in contributions paid, or fairness between generations.

There should also be regard to simplicity and stability that would assist the population's understanding and confidence in the State Pension.

We have grouped the rest of our submission into three main sections;

- Sensitivity of the formulaic link to projected longevity;
- Alternatives to a universal SPA; and
- Practice in other countries.

Our comments are made on the basis of the current policy intent that future SPAs should be linked to increases in projected life expectancy. We recognise there are alternative views that consider an ever increasing SPA as inappropriate and that various groups favour alternative ways of tackling pension sustainability issues.

We also note that, historically, since the earliest State Pension in the UK in 1907, there have been material changes in the pension system at regular, 15 to 20 year, intervals. (Major changes have taken place in 1926, 1948, 1963, 1978, 2002 with further various recent changes up to 2016.) We therefore suggest that when the Secretary of State does make proposals, it is important to remember that the future may bring other changes to the State Pension system, some of which may be unrelated to SPA.

Whatever changes may be made to State Pensions in the future, we do not believe that the State Pension alone will ever be sufficient to meet all of a future pensioner's income requirements. With this in mind, we recommend that the Government more forcefully encourages greater private occupational pension saving. We recommend that it encourages the public to think of pensions in terms of the income they expect to need (in current purchasing power) in retirement together with when they wish to retire. Government should encourage individuals to relate this income to necessary levels of individual saving and the timescales over which it must occur. If the Secretary of State decides to make changes to the progression of SPA, we would encourage using all communications to emphasise the importance of private retirement saving.

Sensitivities of formulaic link to projected increases in life expectancy

In parallel with the independent review being chaired by John Cridland, we note the Government Actuary will also submit a report assessing increases in SPA that would ensure the proportion of adult life spent in receipt of the State Pension does not exceed 33.3%.

The proposed formula for the Government Actuary to use in his report expresses the proportion of adult life spent in receipt of State Pension as:

Proportion of adult life spent in receipt of SP=

$$\frac{(Life\ expectancy\ at\ SPA)}{(Life\ expectancy\ at\ SPA + SPA - adult\ life\ starting\ age)}$$

The SPAWP's report considered the sensitivities of this formula to a number of factors (section 6). Our report used the then most recently published national projections of life

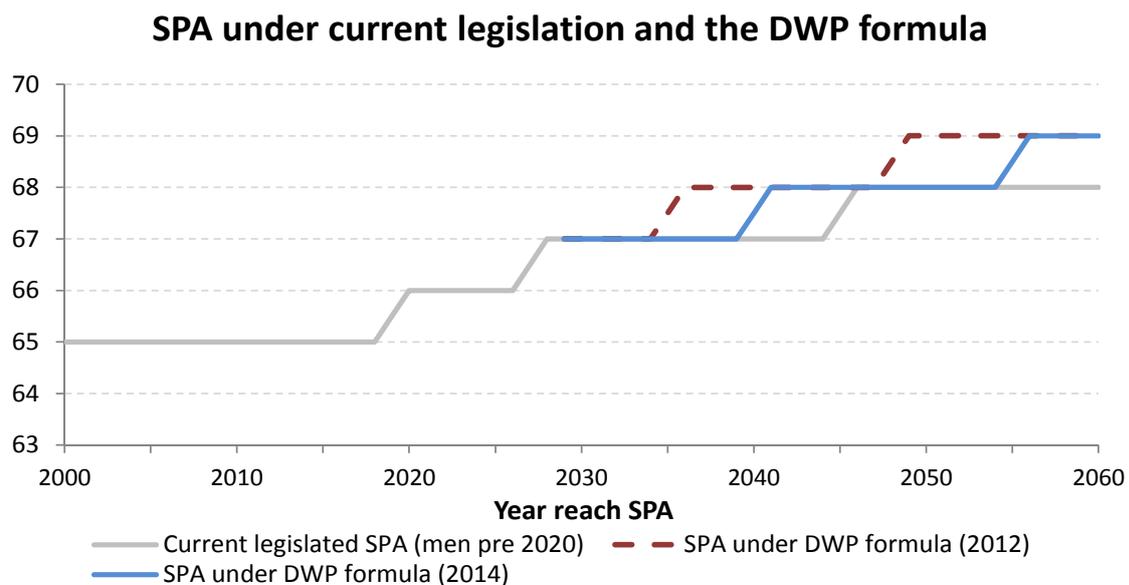
expectancy, namely the ONS ‘2012-based’ projections. We have updated our work in that report to take account of the latest projections, the ONS 2014-based life expectancy projections.

In generating the analyses that follow we have made a number of assumptions. Specifically:

- The Secretary of State will publish the outcome of the first review of the SPA in early 2017, so any changes arising from the review will take place from 2029 onwards;
- Any changes to SPA will be phased in over a two year period, ending at the point at which the new SPA comes into effect in order for the proportion of adult life spent in receipt of State Pension to remain below 33.3%;
- The population numbers in the numerator of the formula are the projected mix of men and women at the relevant SPA.
- It is possible for any reduction to SPA to limit the proportion of adult life spent post SPA at 33.3%.

1. Potential progression of SPA

Figure1:



Source: Own calculations using ONS 2012-based and 2014-based principal projections (UK)

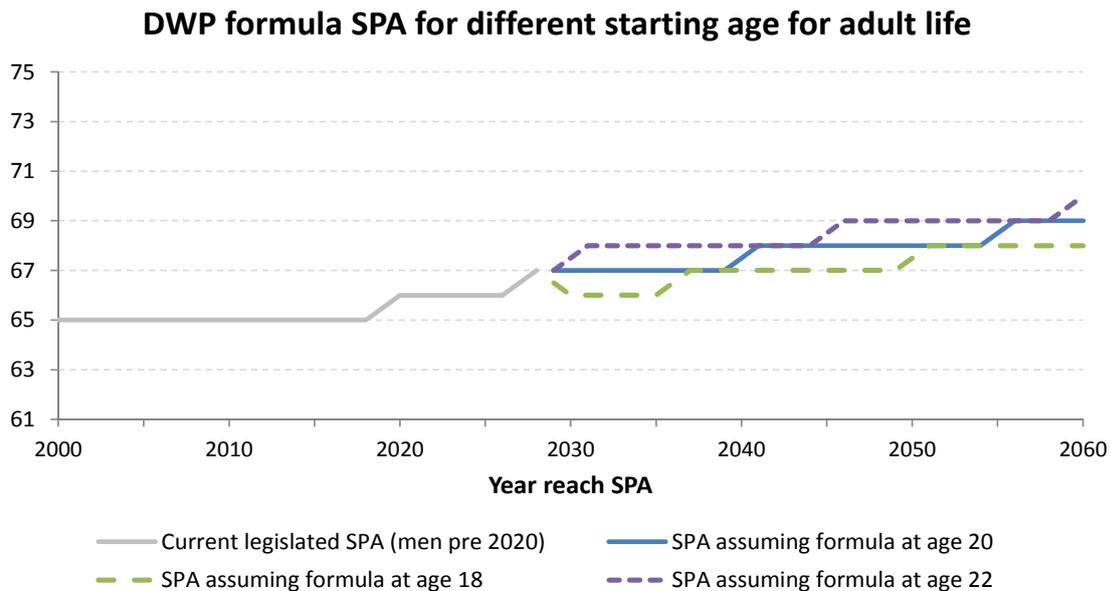
Using the DWP formula with the ONS 2014 principal projections suggests an acceleration of the currently legislated schedule of increases to SPA. The pace of increase is, however, slower than was expected based on the ONS 2012 principal projections. Figure 1 (above) highlights how:

- the legislated increase in SPA to 68 would be brought forward 5 years to between 2039 and 2041 based on the ONS 2014 principal projections;
- an increase in SPA to 69 would need to occur between 2054 and 2056; and
- there has been a material change in the pattern of increases in SPA suggested by the 2014-based projections (compared to the 2012-based projections) with notably slower pace of increase in SPA suggested by the 2014-based projections.

This chart highlights the challenges in projecting mortality. Inclusion of additional data leads to a different conclusion. We would anticipate including additional years in future data will contribute further to fluctuations in life expectancies.

2. Sensitivity to the choice of 'adult life starting age

Figure 2:

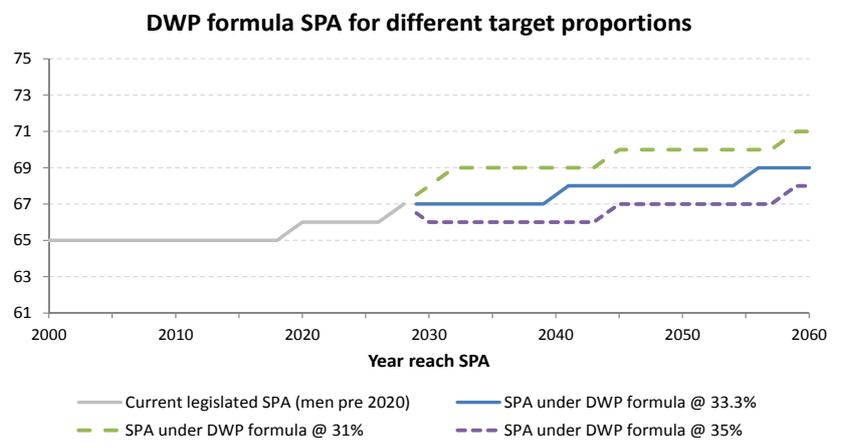


Source: Own calculations using ONS 2014-based principal projections (UK)

The formula proposed by the DWP suggests using starting age for adult life of 20 in accordance with OECD convention. In practice the formula is relatively sensitive to the choice of when adult life starts. Reducing this to age 18, for example, (the age at which people are considered adult enough to vote) would delay the required increase in SPA to 68 by 10 years.

3. Sensitivity to 33.3% cap

Figure 3:



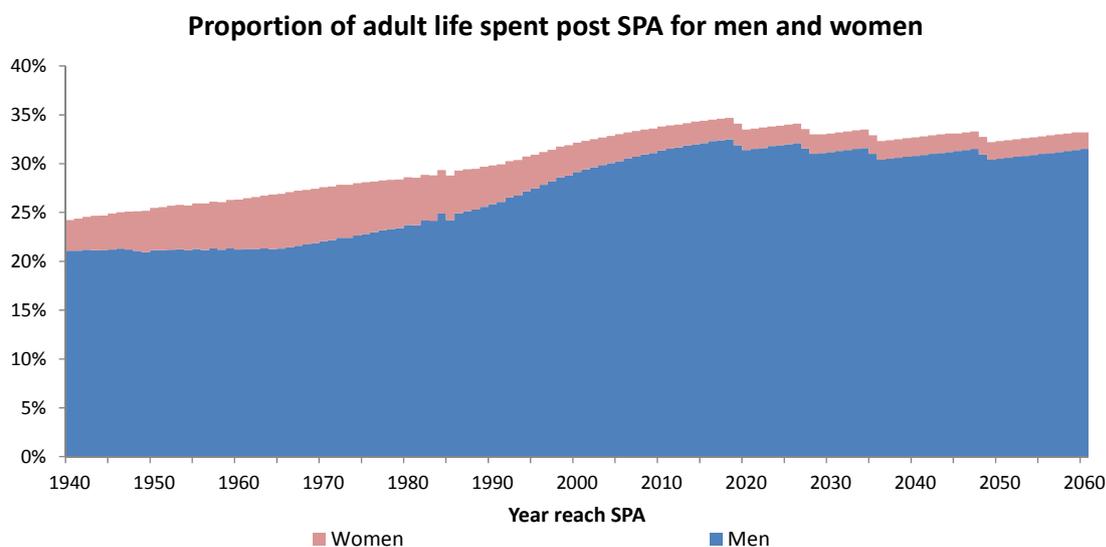
Source: Own calculations using ONS 2014-based principal projections (UK)

From Figure 3 (above) we note that small changes in the 33.3% target for the proportion of adult life spent post SPA would result in very different rates of increase in the SPA. Given this particular sensitivity, we would encourage more detailed explanation for the rationale behind this choice of “1/3rd”.

We undertook a small survey of pension actuaries that indicated that some people felt that the proportion could be reduced as far as 25%. Our work shows that this would require a large immediate increase in SPA.

Simple calculations show that if 67 is the correct SPA for 33.3% in, say, 2030, life expectancy for the 67 year old is survival to around 90. Changing to 25% would imply SPA of around 73 in 2030. A proportion of 25% could be justified historically (see Figure 4). If we assume an SPA of 65 historically for men and women (to be consistent with the requirement that future SPA is equalised for men and women) then prior to the 1980s the average proportion of adult life spent post SPA was 25% or less. Since the 1980s life expectancy has risen rapidly, especially for men, and so the proportion of adult life spent post SPA has also risen. **It is this rise in life expectancy (and commensurate rise in costs of state pension) which has stimulated the need to increase SPA.**

Figure 4:



Source: Own calculations using HMD data for mortality for calendar years up to and including 2012, ONS 2012-based principal projections for 2013, and ONS 2014-based projections for 2014 onwards

4. Sensitivity to longevity projections

A key aspect to the progression of SPA suggested by the formulaic approach is the use of projections for future increases in life expectancy. It is important to note that any projections of life expectancy rely upon assumptions of future mortality changes. Such assumptions are

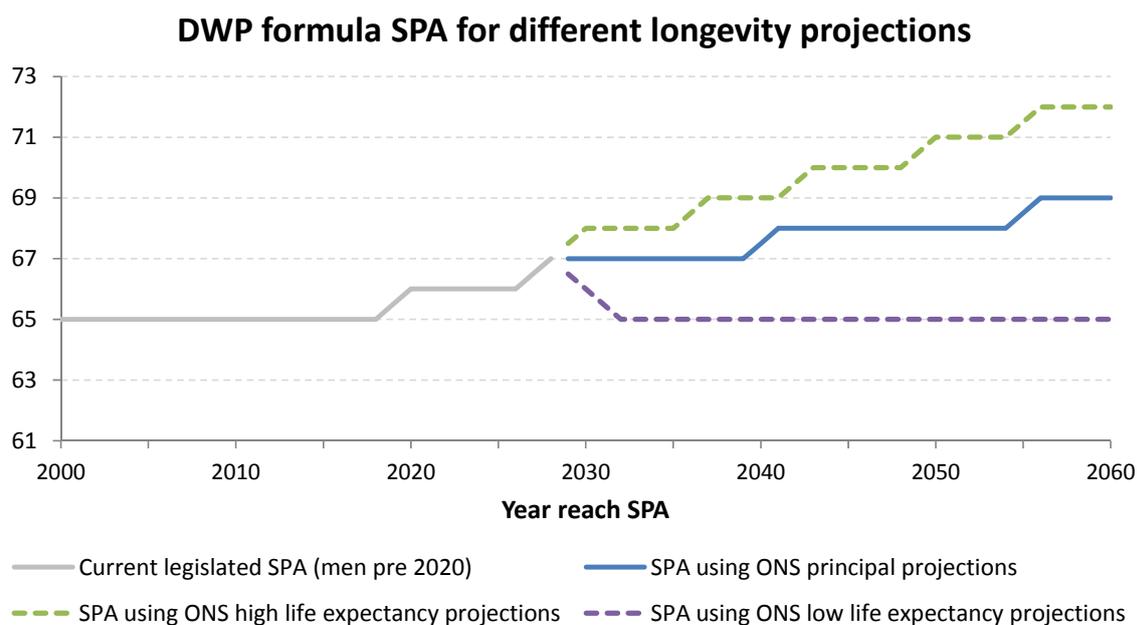
inherently subjective – predictions of future average changes in mortality contain a high degree of uncertainty.

Most future mortality projections reflect the improvements revealed by successive recent investigations. They will most likely include an assumption that these rates of improvement may continue in the short term. Typically, they also assume the recent high rates of improvement may tail off at older ages and in the more distant future. The use of cohort life expectancy projections substantially increases the importance of the assumed long term rate of improvement.

The subjective nature of projection methods means that other projections of longevity could turn out to be more accurate than the one chosen. It is therefore necessary to consider the range of life expectancies that could emerge from differing projections.

The ONS has published higher and lower projections of life expectancies alongside the principal projections to be used by the DWP. Figure 5 below shows the sensitivity of the SPA formula to variations in projections of life expectancy.

Figure 5:



Source: Own calculations using ONS 2014-based principal projections (UK)

5. Understanding longevity projections

Given the sensitivity to longevity projections, we have included some background information to the most recently published projections from the ONS, along with some thoughts on the scenarios with which these projections are broadly consistent.

The ONS 2014-based UK mortality projections start with (smoothed) observed mortality by age for 2011². Allowance is then made for the year on year reductions (improvements) in these age-specific mortality rates. Initially the mortality rates are projected forward from 2011 to 2014 assuming the same level of improvements as between 2010 and 2011. Beyond 2014 this improvement rate blends to an assumed rate of reduction of 1.2% p.a. (for most ages)³. This blending happens over a 25 year period, after which point (2039) the rates of improvements are held constant. The 1.2% represents the average annual rate of improvement seen over the whole of the 20th Century.

The projections have a dual reliance on current mortality – both for the starting mortality rates and the starting levels of improvement. Consequently, material revisions can happen between successive projections. For example the heavier than expected mortality between the 2012-based and 2014-based projections led to a material change in future projections, with lower anticipated future life-spans and so slower anticipated increases to SPA under the DWP formula.

A consequence of the DWP formula working on the basis of cohort life expectancies is that the progression of SPA is predominantly driven by the ‘long term rate’ assumption of 1.2% p.a. reductions in mortality. One more tangible way to understand this assumption is in terms of how observable (‘period’) life expectancy will increase in future.

Figure 6a:

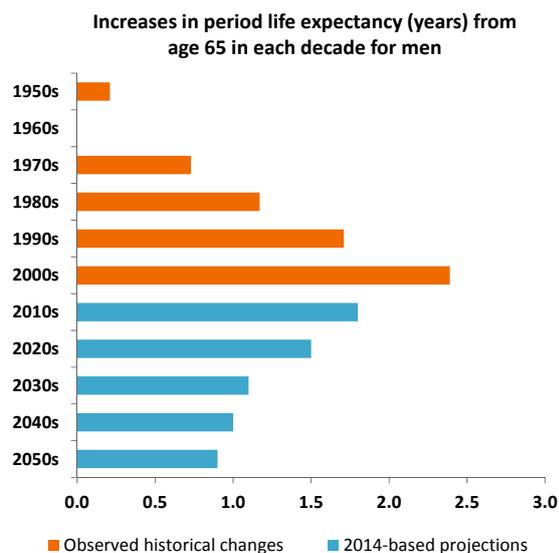
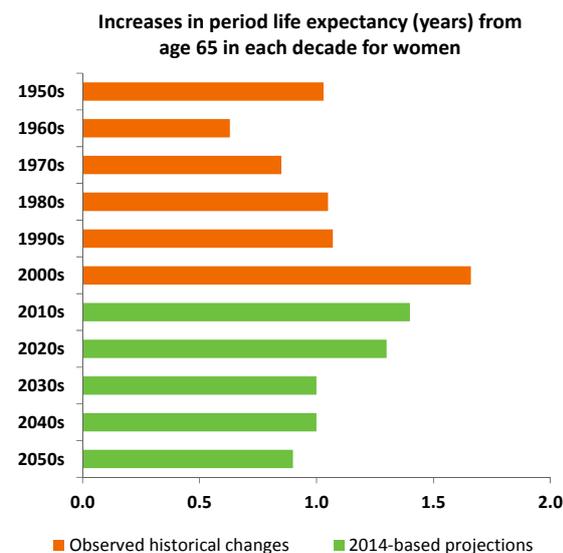


Figure 6b:



We can see the 2014-based projections indicate that increases in life expectancy will level off at a little under a year every decade.

² Mortality for the period 1961 to 2013 is smoothed to get to the historical mortality rates including those for 2011.

³ Note that a 1% improvement means that mortality rates are multiplied by 0.99. Thus if there is a 10% chance of dying at say age 80 in 2030, there is a 9.9% chance of those aged 80 in 2031 dying in that year.

Alternatives to a Universal SPA

Some commentators are suggesting there may be well defined groups within society, for whom projections of future life expectancy are somewhat lower than for other groups. This is most commonly suggested to be due to regional, and/or socio-economic factors, although it is also still currently the case that gender is another factor that generates differences in projected future life expectancies. It has been observed that having a universal SPA means that any given change in the universal SPA would affect these different subgroups of the population to different degrees. This could lead to calls to move away from having a universal SPA.

These comments appear to be based on the observed differences between the average experience of these certain subgroups of data. To put this into context, we consider below the variation in life expectancy from age 65 in Upper Tier Local Authorities (UTLA) in England (Figures 7a and 7b). This shows a variation of almost 6 years within genders. Looking across gender and including the other countries within the UK would increase this range.

Figure 7a:

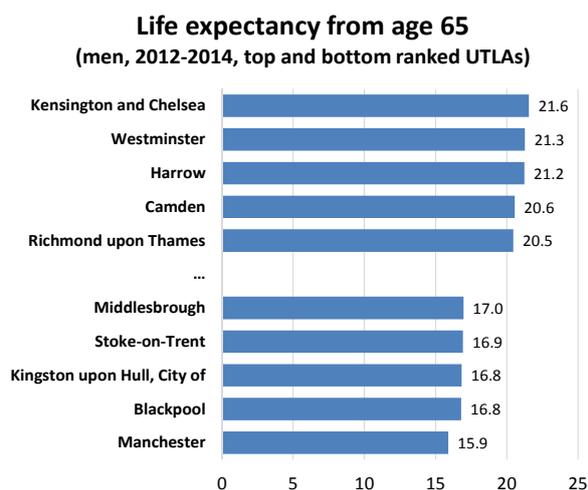
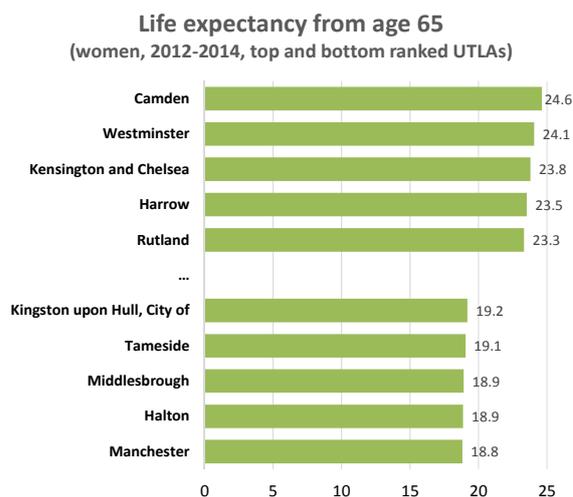
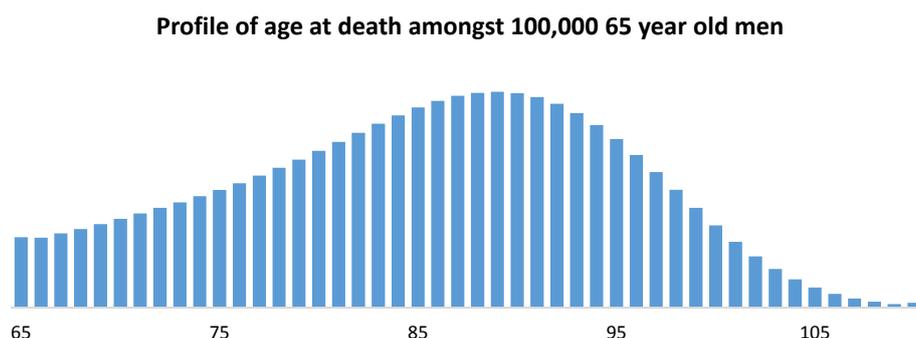


Figure 7b:



In contrast, within a group of lives there will always be variation in the age individuals live to owing to factors other than their sub-group characteristics, including unexpected events. For a group of lives aged 65, the range within which 75% of lives die spans almost 25 years (Figure 8).

Figure 8:



Source: Own calculations based on ONS 2014-based principal projections (UK men)

Variation in life expectancy within any sub-groups is likely to be greater than between the "average expectations" of the different groups. That is, if it were proposed to operate a system that applies different SPAs in some way to these different groups, within each group there will still be many people who are affected significantly differently by any subsequent change in the group's SPA. The nature of pooling (the basic premise of insurance) will always involve some element of "unfairness" when looking at ultimate outcomes; however, predicting which individuals will gain, or lose, within insurance is impossible. It is important that if the SPA were variable, there should be limited opportunity for individuals to select against the State.

We also note that for some people, often again in reasonably well defined groups, there is data which suggests only a relatively short period of the lifetime in receipt of State Pension is expected to be in good health. There is likely to be a strong correlation between this factor and address. It is possible therefore to argue for a system that counters some of the perceived unfairness by factoring changes in healthy life expectancy into SPA increases, or by 'joined-up' policy across government departments of placing greater emphasis on extending healthy life expectancy.

The figures below highlight that whilst some correlation exists between life expectancy from age 65 and the proportion spent in (self-reported) "good" health at the English (upper-tier) local authority level, the correlation is not perfect.

Figure 9a:

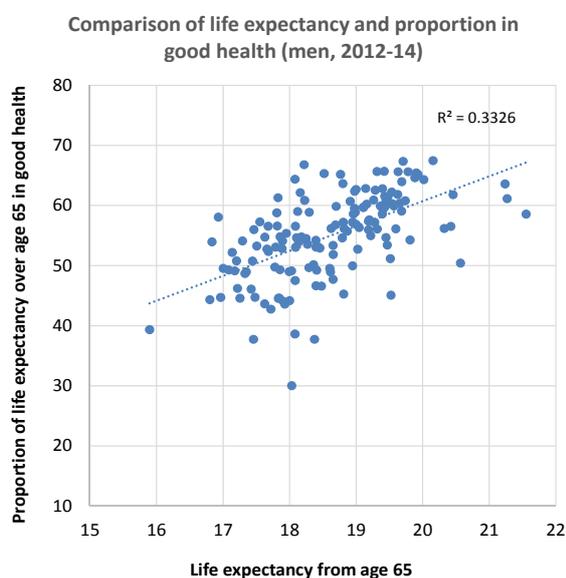
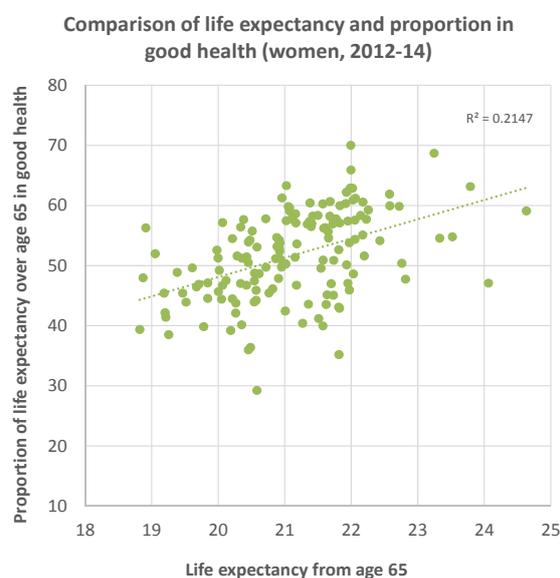


Figure 9b:



Source: Own calculations based upon ONS data of life expectancy at age 65 and proportion of life expectancy spent in (self-reported) good health. Each point on scatter-plot represents one of the 150 Upper Tier Local Authorities (UTLAs) in England.

At a local level, therefore, the correlation between life expectancy and its proportion spent in good health is relatively weak. In contrast, similar analysis carried out by grouping areas into ten deprivation deciles provides a strong correlation between life expectancy and the proportion spent in good health.

If some groups are allowed lower SPAs to increase fairness, it would be logical to argue that other groups should have higher SPAs to maintain "fairness" for them and to maintain the "average" attainment of 33.3%.

It would be very challenging to design and implement a system which is sufficiently discriminating to provide a meaningful improvement in perceived fairness. It would also be challenging to implement a system that meets simplicity and sustainability requirements, without being susceptible to "gaming". This is relevant bearing in mind that changes in SPA will be announced many years in advance to enable suitable planning by government and individuals. During the interim period, there may be significant changes in understanding of life expectancies, including the extent of the differences between the sub-group averages.

We believe it could be beneficial to investigate ways in which some alternative means is found to compensate those people (not particularly whole groups) who are particularly adversely affected by future changes. Such options could include:

- extending or enhancing other social security benefits available to individuals in particular needs in the periods shortly before SPA; or
- some form of early retirement of State Pension being allowed for individuals in special circumstances (see below).

The argument that the variation within groups is larger than the variation between groups also acts against suggestions that applying differentiated NI contribution rates (and hence having different or "unfair" contributions) could offset the perception of "unfair" benefits.

Finally on the questions of fairness, having one flat level of State Pension in itself could imply material unfairness. Namely: higher paid people make, and have made on their behalf, significantly greater contributions under the NI regime than lower paid workers. The universal Single Tier State Pension removes the earnings related State Pension elements, and as such may be perceived as having introduced unfairness, albeit in a different way.

Alternatives for the State Pension Age

If some added complexity is considered acceptable in order to offset some of the perceived unfairness, we have set out below some alternatives. We recognise there is a political decision on the balance between complexity and the perception of greater fairness. Some of the alternatives include the potential for individuals to work the system to their material advantage; in actuarial terms, to "select" against the State. We would emphasise the IFoA does not propose any of these alternatives.

Variable SPA v Universal SPA

An alternative to a universal SPA could be to have a variable SPA, based on

- A "SPA window", with an early retirement reduction factor applied to those who opt for the State Pension at the lower end of the age window;
- Vary SPA by postcode and socio-economic groups, as average life expectancies vary based on these factors. Alternatively, it would be possible to take into account occupation and earning levels. This would reflect that labour-intensive occupations are associated with a lower average life expectancy and also the nature of certain occupations prevents individuals working to their late 60s.

- Set the criteria for SPA based on a minimum number of years of contribution.

Variable State Pension

If the preference is for a universal SPA, varying the level of pension may be another alternative to address the issue of fairness and affordability. This may again be by region, occupation or earnings levels.

Within a universal SPA, it would be possible to contain future State Pension costs by allowing SPA increases to be deferred, or re-introducing some approach to means testing. (It may be possible to phase out State Pension from pensioners whose overall income means they pay higher rate income tax).

Early Payment of State Pension

One reasonably straightforward solution which may go part-way to meeting some of the criticisms based on average life expectancies might be to allow State Pension to be paid from the earlier of:-

- Attaining the defined SPA, say 67, or
- Completion of, say, 45 years of full NI contribution records (allowing suitable credits for maternity leave, etc.)

This may offer some people, who enter the workforce earlier, the chance to retire earlier. Such individuals may be marginally more likely to be in those groups that experience the slightly lower life expectancy. It may also be perceived as fairer compared to the current system where a graduate entering the workforce at 23, say, retires after contributing for 44 years, whilst a school leaver at 18 might contribute for 49 years. Even such an apparently simple amendment is not without complexities, given the possible range of career breaks, secondments, periods of unemployment, etc an individual may experience.

Whilst we have highlighted potential changes to the system to reduce unfairness between sub-groups of the population whose average proportion of life in receipt of State Pension may be noticeably lower than the target 33.3%, it may also be possible to tackle unfairness on an individual level.

Early Retirement State Pension

One such approach would be to allow early retirement access to State Pension. This could be subject to early retirement reductions for individuals in limited, well defined, target groups of the population (long term unemployed, long term sick, the disabled, carers) who might otherwise be eligible for other welfare benefits. Similar results could also be achieved outside of the State Pension through amendments to other welfare benefits. These other benefits are already largely means, or circumstance, tested and so may be able to be better targeted at those in particular need who are adversely affected and some systems are already in place for paying their benefits. We note that such an approach is broader than the scope of the review.

There would be a need to recognise and budget for any additional costs incurred by removing the unfairness in this way. To the extent that any actions reducing unfairness would lead to some of the populace accessing their State Pension earlier, there would be an

increased cost where the pension benefit exceeds alternative welfare benefits. It would be a political decision whether the cost is acceptable and how to finance it.

We would encourage the Review, and the Government more generally, whichever route is opted for, to make further efforts to educate the public on the necessity of private pension provision to reduce the dependence on the State. If increasing the SPA serves only to move people from State Pension receipts to other welfare receipts, the purpose of the review will not be served unless those alternative benefits are very well targeted.

There is more detail on the alternatives described above set out in section 8 of the State Pension Age working party report.

What are other countries doing?

The 2015 OECD Pensions At A Glance (“PAAG”) paper includes analysis of recent pension reforms, the role of first-tier pensions, the impact of short and interrupted careers and the sensitivity of future replacement rates to parametric changes.⁴ In the following sections we summarise some of the OECD's findings which appear to be most relevant to the State Pension Age.

We note from the 2015 PAAG paper that:-

- Nearly all 34 OECD countries were actively changing their retirement income provision systems since the previous publication of PAAG (OECD, 2013)⁵;
- There was no country that operated different SPAs for different groups apart from;
 - a) some that differentiate SPAs by gender; and
 - b) some that appear to allow (some parts of) benefits to be taken early for some, or all.
- Most developed, western, first world economies have already announced plans to increase SPA to age 67, or greater, before the UK SPA is expected to have reached 67 in 2028. Exceptions are: Canada (1 year later) and Germany (3 years later).
- Of those countries appearing to maintain lower SPAs, most had either
 - a) an appreciably lower (period) life expectancy at age 65 on the OECD's basis;
 - b) an appreciably higher State Pension spend as a proportion of GDP than the UK, or
 - c) a State Pension that is largely defined contribution.

Recent pension reform

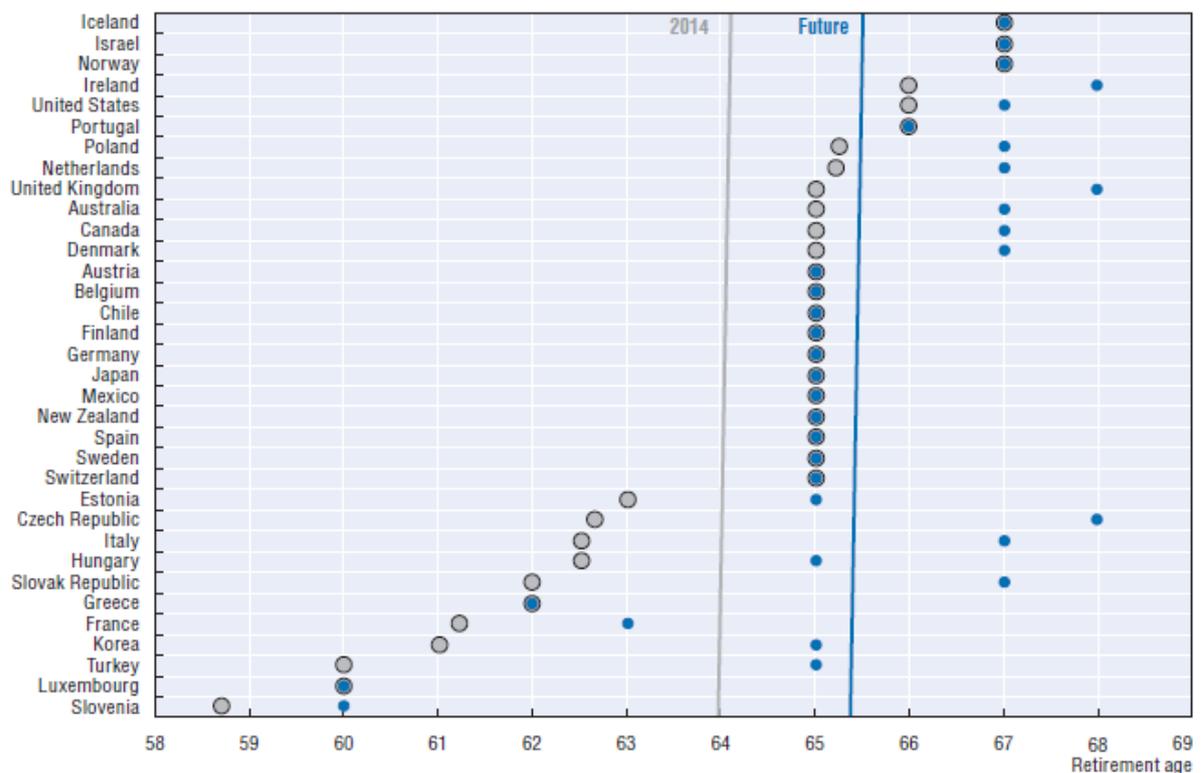
The 2015 PAAG paper's findings on recent pension reform included

⁴ http://www.oecd-ilibrary.org/social-issues-migration-health/pensions-at-a-glance-2015_pension_glance-2015-en

⁵ http://www.oecd-ilibrary.org/finance-and-investment/pensions-at-a-glance-2013_pension_glance-2013-en

- The most popular measure to improve financial sustainability was strengthening the incentives to work longer by increasing the minimum retirement age and/or the main retirement age. This change enlarges the contribution base while preserving adequacy for those who are able to work longer.
- Very few OECD countries have carried out extensive reforms through nominal benefit cuts.
- Most pension reforms have been focused on prolonging working lives at the end of the career through:
 - a) Increases in the statutory retirement age;
 - b) Tightening of early retirement provisions;
 - c) Higher financial incentives to work beyond the pensionable age and higher penalties for early pension benefit; and
 - d) Greater possibilities to combine work and pensions.
- Based on the most recent legislation, the retirement age of males entering the labour market at age 20 will increase from 64 years currently (grey line), on average across all OECD countries, to 65.5 years in the late 2050s (blue line). See "Figure 1.5" below.

Figure 1.5. Current and future retirement ages for a man entering the labour market at age 20



Source: See Chapter 5, Tables 5.7 and 5.9.

StatLink  <http://dx.doi.org/10.1787/888933300251>

Source: Figure 1.5 of OECD PAAG 2015

- In the future (using currently announced future changes) the highest male pension age, given labour market entry at age 20, will be 68 years (in the Czech Republic, Ireland and the United Kingdom). The lowest retirement age of 60 will apply in

Slovenia and Luxembourg. Beyond these two countries, only full-career males in Greece and France entering the labour market at age 20 in 2014 will be entitled to a full pension before age 64.

- Many OECD countries are also restricting access to early retirement with some special treatments noted for special groups, e.g. the unemployed.
- In Austria, the required insurance period for eligibility for early retirement is increasing from 38 years in 2013 to 40 years in 2017. Additionally, the minimum early retirement age increased in 2014, from 60 to 62 years for men and from 55 to 57 years for women.
- In Belgium, the minimum age for the early retirement benefit will increase from 60.5 years in 2013 to 62 years in 2016, with the necessary contribution period also increasing from 38 years to 40 years. Further tightening of early exit pathways in some special regimes (such as for policemen) are being considered.
- In Denmark, the minimum early retirement age will increase from 60 years to 64 years in 2023 while it will also introduce a new senior disability benefit for workers with low work capacity due to health problems.
- In Finland, the part-time pension age will increase to 61 and early retirement for private sector workers will no longer be possible. For workers born after 1951 the early retirement age will increase from age 62 to 63. It will phase out the early retirement pension for the unemployed, while unemployed individuals born before 1958 will still be able to retire at age 62 without reductions.
- In the Netherlands, early retirement options for workers in physically demanding occupations will be phased out.
- In Portugal, early retirement had been suspended until the beginning of 2015. However, long-term unemployed workers can retire from age 57.
- In Spain, the early-retirement age is increasing in line with the change in legal retirement age from 61 to 63 by 2027 in cases of registered unemployment; the contribution period for involuntary early retirement is increasing from 31 years to 33 years; and for voluntary early retirement, the pensionable age will be 65 and the contribution period will increase to 35 years.

Comparison with other countries

The 2015 PAAG paper includes data for 42 countries. From this data, we have calculated an estimate for the “Proportion of ‘adult life’ spent in retirement” for each country. This is based on each country’s male SPA that is currently expected to apply in 2028, when the UK’s SPA reaches 67. This will provide a comparison taking into account planned changes up to 2028, which is the earliest date any further changes in UK SPA could apply.

The OECD data uses "period" life expectancies (i.e. based upon mortality rates observed in specific calendar years used for each country's recent mortality statistics), rather than projected future cohort expectancies. The life expectancies are therefore not specific to a particular generation – those currently aged 65 would generally be expected to live longer and so the actual proportions in retirement will be higher than shown below. This largely explains the difference between the figure for the UK shown below and those shown in Figure 4.

'Adult life' starting age has been taken as age 20 in line with OECD convention and consistent with the UK government's proposed assumption for the Government Actuary to use.

To calculate "Proportion of 'adult life' spent in retirement" for each country, we have used a similar formula to that the Government Actuary will use in his report:

Our formula:

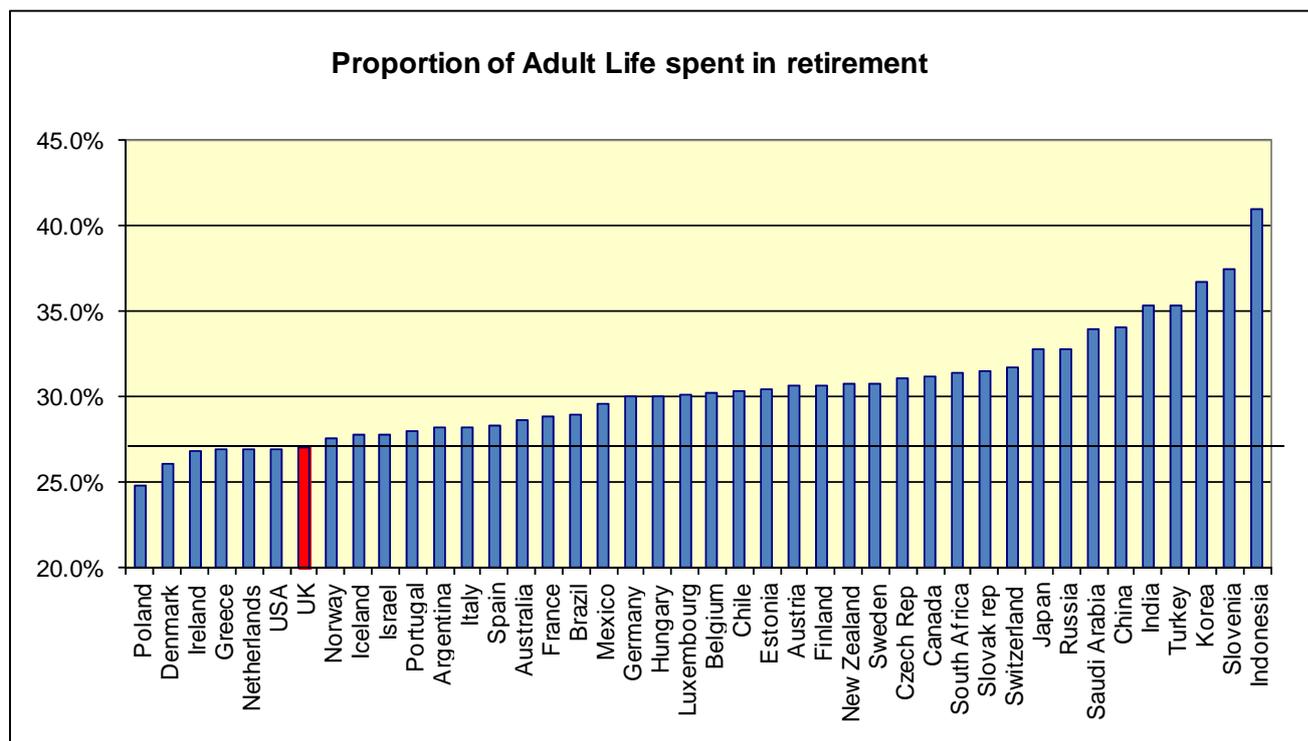
$$\text{Proportion of adult life spent in receipt of SP} = \frac{(65 + \text{life expectancy at age 65} - \text{male SPA expected in 2028})}{(65 + \text{life expectancy at age 65} - \text{age 20})}$$

Government Actuary's formula:

$$\text{Proportion of adult life spent in receipt of SP} = \frac{\text{life expectancy at SPA}}{(\text{SPA} + \text{life expectancy at SPA} - \text{age 20})}$$

Figure 10 shows our deduced respective "Proportion of 'adult life' spent in retirement" of the countries covered by PAAG in increasing order.

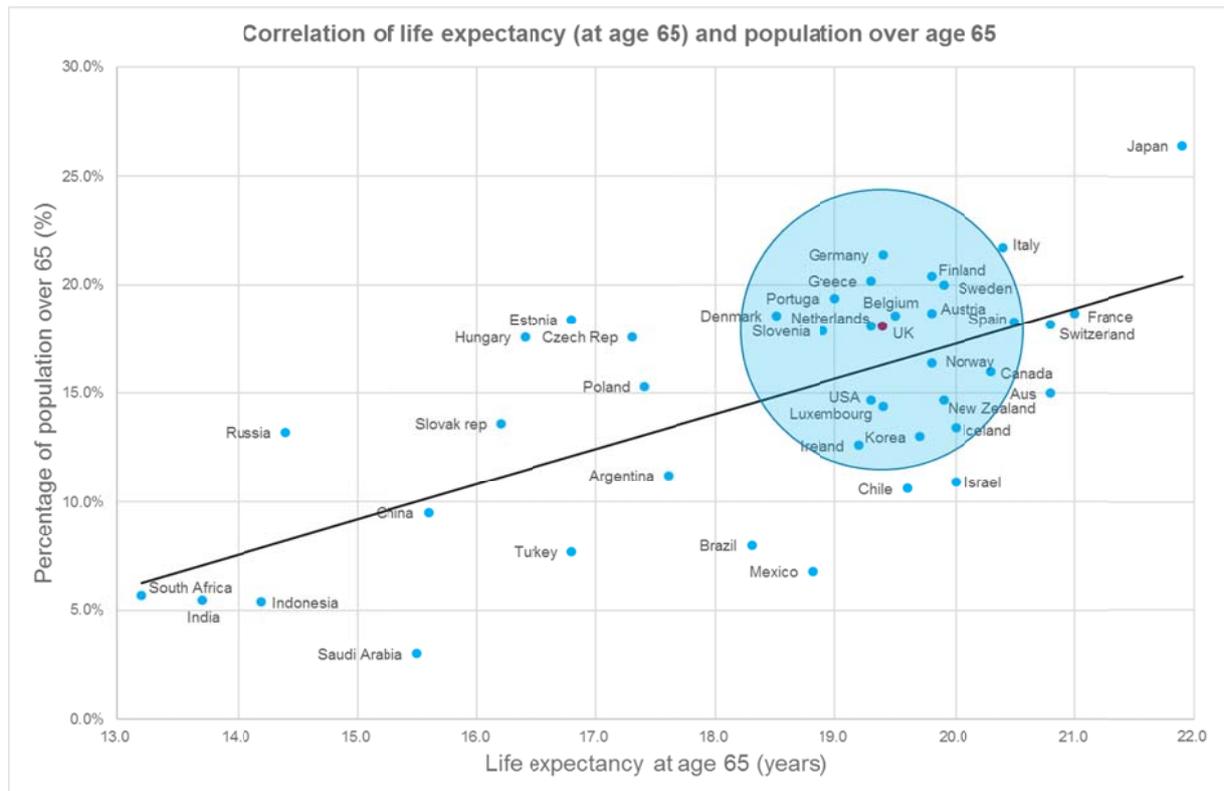
Figure 10:



Source: PAAG2015, Chapter 11, PAAG 2015: Country profiles – own graphic

Using the information in PAAG 2015, we can focus on those countries that exhibit similar characteristics to the UK in terms of (period) life expectancy and proportion of population over 65.

The chart below shows the correlation between life expectancy at age 65 and the proportion



of population over age 65. We believe that it may be helpful to give further consideration to the pension proposals in those countries that appear similar to the UK on these factors. It is notable, however, that some of these countries appear to spend an appreciably larger proportion of their national GDP on State benefits than the UK does.

Figure 11:

Source: PAAG2015, Chapter 11, PAAG 2015: Country profiles – own graphic

Concluding remarks

We believe that decisions regarding future changes in SPA require a clear understanding of the purpose that Government expects the State Pension to fulfil. We would encourage the Government in its future communications on the matter, to set out its view on this. Such a statement would aid understanding of an appropriate balance between complexity in the State Pension system and perceptions of fairness between sub-groups in the population.

In respect of the specific areas of our report-

1. *The output from the required formula.*

The results of the DWP formula are particularly sensitive to two parameters set by the Secretary of State (adult life starting at age 20 and the 33.3% target for the proportion of adult life spent post SPA). The rationale for each remains unclear.

We recommend that any future changes in these two parameters should be minor and subject to full justification. Otherwise, the progression of SPA could be subject to manipulation.

The formula's output is very sensitive to the projection assumptions used and to recent mortality experience used as the projection base. The Government Actuary will choose the projection assumptions having taken advice from experts in various fields. We expect the Government Actuary to provide alternative projections illustrating the potential variability in the range of outcomes.

Assumptions about future mortality rates and population sizes include estimates of net immigration and future fertility rates. These may be more uncertain due to changes in immigration policy following the UK's exit from the EU. This could have an impact on the SPA progression.

The formula output at successive reviews may be variable. It may indicate suitable future changes in SPA, but should not necessarily lead to changes to SPA. We recommend consideration of the formula output to identify the reasons why future experience could differ from expectations. While the formula results may provide a good indication of suitable future changes, reviews of other factors represent necessary important additional checks on whether those changes are appropriate.

2. *One universal SPA or multiple SPAs.*

There are sub-groups in the population with average life expectancies lower than the overall population average, but within each sub-group there will be individuals whose experience is very different to the group's average. These sub-groups, on average, will be affected disproportionately more by each increase in SPA and will experience an average proportion of life in receipt of pension lower than the 33.3% target. Having some form of differentiated pension for some groups could, therefore, be seen as providing a marginally (on average) fairer pension system. There will always be individual winners and losers no matter how "fair" the system.

This suggests that it could be challenging to design and implement a system for State Pension that makes, through the pension itself, material reductions in the perceived unfairness of a universal SPA. This means that the underlying system remains broadly of the fixed amount type.

Most possible alterations to the system introduce additional complexity making understanding and predicting pension outcomes more difficult. They also, in many cases, introduce the potential for people to game the system by selecting against the State.

Overall, we consider that some minor changes might introduce some greater (average) *perceived* fairness, but that a more individual approach through targeted early retirement or alternative welfare benefits may be more effective.

3. *Other countries*

We have observed from the OECD work that the UK is not alone in facing the issues raised by improving mortality, ageing populations and tighter fiscal environments. Many countries have taken very similar actions to the UK resulting in many of the OECD countries having SPAs at 67 around the same time that the UK does.

We have not identified, from the OECD work, any countries operating variable SPAs between different sub-groups of the population, except that some retain sex-based

differences and some may allow particular professions (e.g. Army, Police, Fire-fighters, Trawlermen) to retire earlier than others.

Many countries have quite different experiences or positions on some or all of the following factors:

- life expectancy after survival to the late 60's;
- proportions of the population in pensionable ages; and
- expected percentage spend of GDP on State Pension benefits.

Many countries also have different types of State Pension with varying degrees of underlying support for the poorest part of the population.

While it is important to learn from the experiences in other countries, it is not always easy directly to compare that experience with that likely to be seen in the UK. The ultimate policy solution is to find a system that meets as many as possible of the competing features desired by various sub-groups of the population.