Contributions into the State Pension system versus receipts for people of different income and employment profiles

THE ANALYSIS IN THIS NOTE WAS PRESENTED AS EVIDENCE FOR THE INDEPENDENT STATE PENSION AGE REVIEW IN JANUARY 2017, BEFORE THE SPRING BUDGET 2017.

The following analysis explores how much people of different socio-economic groups and ages, in stylised circumstances, might contribute throughout their lifetime to the National Insurance versus how much they might receive from the new State Pension in retirement.

This note compares the total money that these individuals may have paid in National Insurance contributions (NIcs) throughout their working lives and compares it with the total amount they may receive through the State Pension.

This note is not about the funding of the National Insurance fund. The fund is a Pay-As-You-Go system where people's NI contributions pay for current benefit recipients; they do not directly pay for their own benefits. NIcs also pay for a range of other benefits alongside the State Pension which have changed in value over time. It is, therefore, inappropriate to make intergenerational comparisons from the analysis contained in this note.

All money is presented in 2016 earnings terms, then aggregated so that the results can be compared consistently. The numbers are based on individual NI contributions only.

The high level results from this analysis are:

- The lifetime NIcs of those on female median earning employees may constitute a lower proportion of State Pension income than men median earning employees as a result of gender differences in earnings distributions and women's higher life expectancy (Table 1).
- The lifetime NIcs of those on lower incomes constitute a lower proportion of State Pension income than those on higher incomes (Table 2).
- Younger people's lifetime NIcs will constitute a greater proportion of the amount of State Pension they will receive than older people (Tables 1 and 3) due to historical differences in NIc rates.
- Those in receipt of NI credits and the self-employed will pay a lower proportion through contributions of what they will receive in income from the State Pension than employees who are in full-time work throughout (Tables 4 and 5).

Individuals modelled

The individuals modelled are men and women earning at the 10th, 50th, and 90th earning percentiles. These are considered for three ages, 20, 40 and 60 year olds. The results for these individuals are set out in Tables 1-3.

Further to these individuals the modelling also considered people who had an interrupted work history where for 10 years they accrued NI credits rather than working and paying contributions. The results for these individuals are set out in Table 4.

Finally the modelling also considered the NIcs of self-employed people, who for comparability of the results were assumed to make profits at the same level as the earnings of the 10th, 50th and 90th percentile earners. The results for these individuals are set out in Table 5.

Assumptions

Pensions Policy Institute modelling uses economic assumptions in line with OBR financial assumptions. This analysis assumes that the State Pension is uprated in the future in line with the triple lock. If the State Pension is uprated by growth in average earnings from 2020 onwards, then the proportion of State Pension income that people have "paid for" would be higher.

The analysis behind this paper uses age and gender specific earnings profiles to calculate the salary throughout working life, and therefore the National Insurance that would be payable, and also the amount of State Pension accrued. It is assumed that NI contribution rates in the future are kept at the current levels; and past NI contributions use the appropriate historical contribution rates and thresholds.

Assumed age of death uses the age and gender based cohort life expectancies from the ONS 2014 based principal projection. The life expectancies used for the median earners are unadjusted from the ONS figures. For the low and high income life expectancies we adjust the figure. The life expectancy is reduced by 3 years from the published figure for the 10th percentile earner, and increased by 3 years for the 90th percentile earner. This is consistent with a 6 year spread of life expectancies by socio-economic position as was noted by the ONS.[1]

[1] ONS - Trend in life expectancy at birth and at age 65 by socio-economic position based on the National Statistics Socio-economic Classification, England and Wales: 1982—1986 to 2007—2011

Presentation of results

The tables in this note all follow the same pattern. Each column presents:

- the gender of the individual,
- which income percentile they are in, and their assumed age of death,
- total NI contributions made by the individual over their working life in 2016 earnings terms (this excludes employer NI contributions made in respect of the individual),
- the total amount of State Pension they receive from State Pension age until death (using the assumed age of death) in 2016 earnings terms, and
- the proportion of the State Pension received that is covered by their own NI contributions (i.e. Individual's NIcs / State Pension received).

NIcs and State Pension paid for employees currently aged 20

Table 1 sets out the amount of NIcs paid by current 20 year olds, and the total amount of State Pension they may receive in retirement. Among the current 20 year olds modelled, none pays in as much in employee NIcs as they receive in State Pension.

Table 1: Money paid out through NIcs during the lifetime and amount received through State Pension income in retirement for people aged 20 in 2016 by gender and income percentiles

Age 20 in 2016	Men			Women		
Income percentile	10th (d. age 85)	50th (d. age 88)	90th (d. age 91)	10th (d. age 88)	50th (d. age 91)	90th (d. age 94)
NIcs paid in	£46,000	£111,000	£211,000	£31,000	£86,000	£194,000
State Pension income received	£167,000	£198,000	£229,000	£198,000	£229,000	£260,000
Proportion of State Pension income paid in through NIcs	28%	56%	92%	15%	37%	75%

Higher paid workers are expected to live for longer than lower earners, meaning they are in receipt of the state pension for longer. In the examples in Table 1 the State Pension is at a flat rate, so the differences in State Pension received are due to receiving it for longer.

NIcs are salary related so the higher paid individuals have paid in a larger amount of NIcs than the lower earners.

Higher earners are expected to live longer and therefore receive the State Pension for longer, but they are also paying in higher NIcs. In the examples in Table 1, the difference in NIcs paid by the higher earners compared to lower earners exceeds the relative difference in State Pension that they receive in retirement due to higher life expectancy.

A 20 year old man earning at the 90th percentile might throughout their working life pay NIcs that total to around 92% of the income they eventually receive from the State Pension. Whereas for a median earning man, 56% of his State Pension is covered by his personal NIcs.

NIcs and State Pension paid for employees currently aged 40

Table 2 sets out the amount of NIcs paid by current 40 year olds, and the total amount of State Pension they may receive in retirement. The 40 year olds in Table 2 have a very similar pattern to the 20 year olds in Table 1.

Table 2: Money paid out through NIcs during the lifetime and amount received through State Pension income in retirement for people aged 40 in 2016 by gender and income percentiles

Age 40 in 2016	Men			Women		
Income percentile	10th (d. age 84)	50th (d. age 87)	90th (d. age 90)	10th (d. age 86)	50th (d. age 89)	90th (d. age 92)
NIcs paid in	£41,000	£104,000	£199,000	£24,666	£76,895	£179,082
State Pension income paid out	£154,000	£183,000	£211,000	£173,000	£202,000	£231,000
Proportion of State Pension income paid in through NIcs	27%	57%	94%	14%	38%	78%

Men tend to have paid a higher proportion of the State Pension they receive in NIcs than women earning at the same percentile point. There are two reasons for this: differences in the gender specific earnings distributions, and differences in life expectancies.

The distribution of women's earnings is lower than the distribution of men's earnings. This means that the man earning at the median level for men has a higher lifetime earnings than the woman earning at the median level for women. This means that the NIcs are lower for the median earning woman, compared to the median earning man.

The woman's life expectancy is longer than the man's. This means that the median earning woman is likely to receive their State Pension for longer than the median earning man. So the total State Pension income received is higher for the woman than for the man.

The combination of both lower NIcs paid and higher total State Pension received lead to a lower proportion of State Pension income covered by NIcs for women than men.

NIcs and State Pension paid for employees currently aged 60

In comparison with Tables 1 and 2, Table 3 shows that older workers lifetime NIcs represent a lower proportion of their total State Pension income than the younger people's. This is caused by lower historical NIc rates, and, in some cases, higher State Pensions due to excess pension payments arising from the additional State Pension.

Table 3: Money paid out through NIcs during the lifetime and amount received through State Pension income in retirement for people aged 60 in 2016 by gender and income percentiles

Age 60 in 2016	Men			Women		
Income percentile	10th (d. age 83)	50th (d. age 86)	90th (d. age 89)	10th (d. age 85)	50th (d. age 88)	90th (d. age 91)
NIcs paid in	£43,000	£97,000	£172,000	£24,000	£66,000	£150,000
State Pension income paid out	£147,000	£199,000	£265,000	£160,000	£202,000	£275,000
Proportion of State Pension income paid in through NIcs	29%	49%	65%	15%	33%	54%

Today's 60 year olds have been paying NIcs since the 1970s. The National Insurance contributions have changed over the years. These changes are largely characterised by an increase in the contribution rate over time, especially for higher earners. This means that younger people tend to have higher lifetime NIcs than older people, on the assumption that future NIc rates remain at current levels.

Before 2016, State Pension income was accrued in two parts, the basic State Pension and the salary-related additional State Pension. The new State Pension was implemented in 2016 and was set at a rate higher than the existing basic State Pension. However, transitional arrangements allow for people who have accrued a combined basic and additional State Pension higher than the new State Pension to receive a top up equal to the excess. Older workers, with more years of accrual of additional State Pension are more likely to have an excess payment, especially higher earners.

NIcs and State Pension paid for employees taking a 10 year career break

National Insurance contributions are not paid when people are out of work and not earning, however it is possible for individuals to accrue NI credits, for example if they are caring. Table 4 considers people aged 40 in 2016 who spend 10 years out of the workforce but who receive NI credits for that time.

Table 4: Money paid out through NIcs during the lifetime and amount received through State Pension income in retirement for people aged 40 in 2016 who received 10 years of NIcs through credits by gender and income percentiles

Age 40 in 2016	Men			Women		
Income percentile	10th (d. age 84)	50th (d. age 87)	90th (d. age 90)	10th (d. age 86)	50th (d. age 89)	90th (d. age 92)
NIcs paid in	£33,000	£84,000	£162,000	£19,000	£60,000	£146,000
State Pension income paid out	£154,000	£183,000	£211,000	£173,000	£202,000	£231,000
Proportion of State Pension income paid in through NIcs	21%	46%	77%	11%	30%	64%

As there are fewer years working and paying NIcs, the total amount of NIcs is lower than the comparable individual who is in employment throughout (Table 2). For example a median earning woman in Table 2 as paid a cumulative £76,895 of NIcs in 2016 earning terms. This compares with the £60,200 paid by a similar woman who has had a 10 year career break.

Credits replace earned NI so that the State Pension does not decrease as a result of missed NI contributions. The total State Pension is therefore the same in Table 4 as it is in Table 2. For example the median earning 40 year old woman might expect a total income from State Pension of around £201,663 in both Table 2 and Table 4.

If the modelling had been carried out on 60 year olds there may have been a difference in the State Pension level because accrued additional State Pension would have reduced for those who had a career break leading to a reduced, or no, excess payment under the new State Pension.

With a reduced level of NIcs, but an unreduced level of State Pension, the proportion of State Pension covered by NIcs is lower than for those who were in employment throughout.

NIcs and State Pension paid for the self-employed

Self-employed people pay NIcs differently to employees. NIcs are payable on profits rather than on salary. There is also currently an additional flat rate NIc for self-employed people currently set at £2.80 a week, however this is due to be abolished. In total the NIcs of self-employed people are payable at a lower rate than those paid by employees.

To present more comparable results self-employed individuals were modelled as having profits at the same level as the employees' earnings profiles assumed throughout (Table 5).

Table 5: Money paid out through NIcs during the lifetime and amount received through State Pension income in retirement for people aged 40 in 2016 who are self-employed by gender and income percentiles

Age 40 in 2016	Men			Women		
Income percentile	10th (d. age 84)	50th (d. age 87)	90th (d. age 90)	10th (d. age 86)	50th (d. age 89)	90th (d. age 92)
NIcs paid in	£36,000	£81,000	£153,000	£24,000	£61,000	£136,000
State Pension income paid out	£154,000	£183,000	£211,000	£173,000	£202,000	£231,000
Proportion of State Pension income paid in through NIcs	23%	44%	73%	14%	30%	59%

Under the pre-2016 State Pension system self-employed people were ineligible for the additional State Pension; they received only the basic State Pension. On the introduction of the new State Pension system self-employed people would receive the full new State Pension, at the same rate as employees.

Paying a lower rate of NIcs, but receiving the same state pension means that self-employed people's NIcs cover a smaller proportion of their State Pension than employees.