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Research Report

The changing generosity of the UK state pension system to the self-employed

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IFS Report R182

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The changing generosity of the UK state pension system to the self-employed



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Preface

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Executive summary

Key findings

Those working for their own business are a small but rapidly growing proportion of the UK workforce.

In 2016, there were just under 4.8 million individuals working for their own business, and they accounted for approximately 15% of the UK workforce, the highest proportion since at least 1854. A recent rise is explained by both a higher number of self-employed individuals and company owner-managers.

The self-employed are in a single year less likely than other workers to accrue entitlement towards the state pension.

In 2016, 18.6% of self-employed workers did not accrue entitlement towards the state pension because their earnings were too low and they were not in receipt of Working Tax Credit or Child Benefit for a child aged younger than 12. This compares with 14.0% of owner-managers and 5.3% of employees.

The proportion of workers not accruing state pension entitlement in a given year has increased over time.

This increased by 0.9 percentage points (ppt) from 6.2% of workers in 2007 to 7.1% in 2016. Approximately one-third of this increase is due to self-employment becoming more prevalent, one-third is due to a legislation change, which meant an individual needed to have a child aged under 12 rather than aged under 16 to qualify for state pension accrual through receipt of Child Benefit, and the remaining one-third through other changes in the prevalence of different types of workers who are able to accrue entitlement.

The new state pension is typically more generous to the self-employed than the state pension system was previously.

The full possible amount of the new 'single-tier' state pension is much greater than that available under just the old 'basic state pension'. In terms of annual accrual, this is slightly offset by the fact that 35 years, rather than 30 years, of National Insurance Contributions are required to receive the full amount and those who manage less than ten years of contributions will no longer receive any state pension.

Self-employed workers who would have accrued entitlement to old state second pension (S2P) could in some years accrue less under the single-tier pension.

Self-employed workers receiving Working Tax Credit or Child Benefit for a young child could have received annual accrual towards S2P as well as the basic state pension, which combined was worth more than accrual to the single-tier pension. But, overall, they will still, most likely, end up with a higher state pension under the post-2016 new state pension as most will only have young children for a few years.

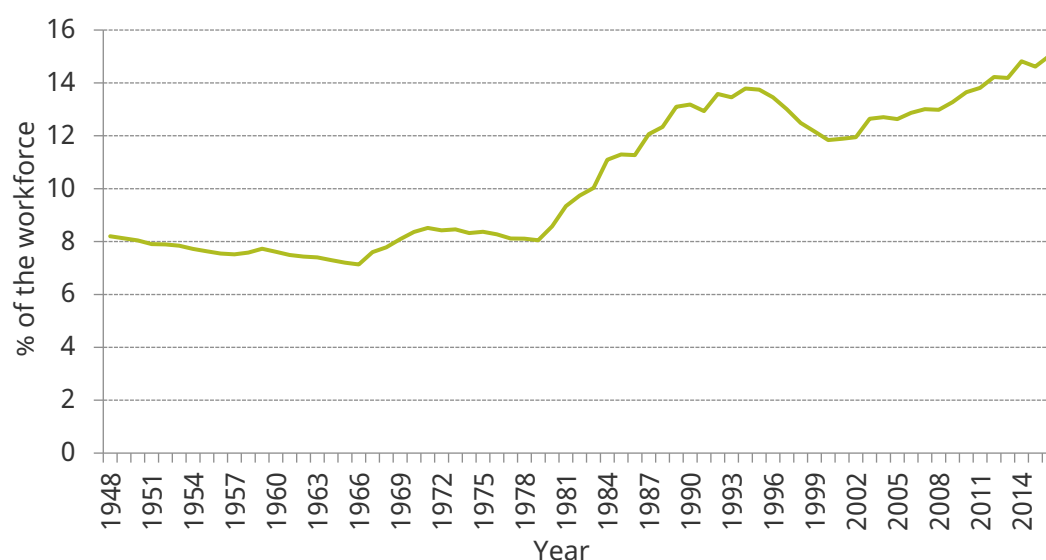
1. Introduction

Recent years have seen increasing concerns in many developed countries over ‘the changing nature of work’. For example, in the United Kingdom, the Taylor Review¹ notes that only 60% of workers are permanent employees. In the United States, a recent review by Mas and Pallais (2020) found that alternative working arrangements such as solo self-employment, zero hours contracts, agency work, independent contractors, and jobs in the gig economy are now more prevalent than ‘traditional’ jobs.

The rising numbers of the self-employed are one of the drivers of these changes. Data from the Bank of England (2018) and the Office for National Statistics (2018a, b) suggest that in recent years the proportion of the UK workforce working for their own business reached its highest level since at least 1854. As shown in Figure 1.1, in the past 20 years the proportion has increased by 3 ppt. With an increasing employment rate and growing population over this period, the numbers of individuals who declare that they are working for their own business as their main economic activity has increased substantially from 3.2 million in 2000 Q2 to 4.8 million in 2018 Q2.

Figure 1.1 also shows that the proportion of the workforce declaring that their main economic activity was working for their own business was broadly flat between 1948 and the end of the 1970s, before growing substantially over the 1980s and again since 2000. Indeed, over the period since 1948, the only significant decrease in the proportion of those working for their own business in the UK workforce was during the recovery from the recession of the early 1990s, due to a sizeable increase in the number of employees during that time.

Figure 1.1. Evolution of the proportion of those declaring that their main economic activity is working for their own business in the total UK workforce



Note: Includes both self-employed and company owner-managers. In Chapter 2, we separate these two groups.
Source: Bank of England (2018).

¹ Taylor et al., 2017.

One aspect of concern about the rising number of the self-employed is that the self-employed generally appear less prepared for retirement than employees. In their final report in 2005, the Pensions Commission (2005, p. 278) noted that a ‘disproportionate percentage of the self-employed appeared in danger of inadequate pension income in retirement’. While, for employees, the introduction of automatic enrolment into workplace pensions has stemmed the decline in private pension participation and dramatically increased membership rates, the self-employed are not covered by automatic enrolment. In 2018–19, the Department for Work and Pensions estimates that only 14% of the self-employed participated in a workplace pension, down from 35% in 2003–04. In contrast, in 2018–19, workplace pension coverage among employees stood at 73%. Even among employees not eligible for automatic enrolment, workplace pension membership stood at 32% (i.e. more than twice the rate seen among the self-employed).² Furthermore, as we show in this report, historically, employees have often been able to accrue greater state pensions than the self-employed, although since the introduction of the single-tier state pension in 2016, this is no longer the case.

This report analyses state pension provision for the self-employed in the context of these two underlying trends: the rising number of the self-employed and the increasing universality of the UK state pension system. We document trends over time in both the proportion of individuals who, although in paid work, do not accrue a qualifying year towards their state pension and in the value of a qualifying year for working-age adults over time.

The structure of this report is as follows. In Chapter 2, we describe recent labour market trends, and we analyse the characteristics of the self-employed (compared with employees) in 2016, using the Labour Force Survey (LFS) and the Family Resources Survey (FRS). In Chapter 3, we describe how the rules of the state pension system have changed over time. Recognising that the self-employed are unlikely to be self-employed for the whole of their life, we provide both an analysis of how the state pension system works for the self-employed, and how it has changed for other types of workers, such as employees. In Chapter 4, we bring together the material in Chapters 2 and 3 to analyse the trends in coverage of the state pension system. Chapter 5 focuses on the generosity of the system, by looking at the value of a qualifying year and how this has changed over time. Chapter 6 concludes.

² Source: <https://www.gov.uk/government/collections/workplace-pension-participation-and-savings-trends>.

2. Trends in self-employment and a snapshot of them in 2016

In order to analyse state pension coverage of the self-employed, we need a more comprehensive understanding about the fraction of population working for their own business and how the numbers have changed over time. In this chapter, we examine the recent trends in self-employment and provide a short description of the main categories of workers based on the data in 2016.

2.1 Data and terminology

In this report, we refer to the three forms of working individuals: employees, self-employed and company owner-managers.³

Employees have a contract with an employer that sets their activities and their pay; they are entitled to a set of legal rights, such as being paid at least the minimum wage (for their age group) and having access to sick and redundancy pay. Both the self-employed and company owner-managers are said to be working for their own business, although the former are unincorporated and the latter incorporated. The self-employed are sole-traders who bear full responsibility for their losses and do not have a different legal entity. They can, however, employ others and have certain protections when working with other companies (e.g. Health and Safety regulations), but are not protected under employment law. So, for example, their hourly income may be below the minimum wage. Company owner-managers are the shareholders of a limited company with a distinct legal form and are offered protection from the company's liability, although the company is liable with all of its assets.^{4,5}

Those working for their own business are split in the aforementioned two categories due to the fact that these two groups face very different tax systems.⁶ In addition, the types of individuals and the types of activity they undertake tend to be different: the company owner-managers are more likely to have higher levels of education, to have higher profits, and to work full-time than are the self-employed.

Individuals can be an employee, self-employed, an owner-manager, or any combination of these at the same time. In this report, those who are only doing work as employees/self-employed/company owner-managers will be labelled 'only' undertaking paid work in this form. They can be both individuals who have only one job or individuals with a second job (or subsequent jobs) in the same legal form as their first job.

³ Employment law also establishes another category of 'workers', but these are split between self-employed and employees for tax purposes and are not distinguished in our analysis (Adam, Miller and Pope, 2017).

⁴ Adam et al., 2017.

⁵ In this discussion, we abstract from partners (i.e. people who jointly own and run a partnership), which is a legal form particularly common in some professional services, such as law, and in farming. Partners will generally be grouped alongside self-employed sole traders in this analysis due to data constraints. For more on partners, see Cribb, Miller and Pope (2019).

⁶ See Adam et al. (2017, p. 6).

If individuals have a second (or subsequent) job in a different legal form than the first, then they will not be captured by our 'only' measure. Thus, we also introduce a second measure: individuals will be labelled as 'any' paid work as an employee/self-employed/owner-manager if they are working under one of these legal forms, regardless of other jobs they might have. Thus, an employee who also has an additional self-employed job is categorised as doing 'any' employee work and 'any' self-employed work, but will not fit in a definition of only doing one type of work.⁷

The data used primarily come from the Labour Force Survey (LFS) and the Family Resources Survey (FRS). Both of these are large-scale household surveys, representative of the UK population and have cross-sectional information about those in and out of paid work. The LFS is the main survey used for studying the evolution of the UK labour market and it has a significantly larger sample size than the FRS. We use LFS data from 1975–2016.

However, the LFS does not provide information on the profits of people working for their own business. For this, we turn to the FRS. The FRS is also better suited for differentiating between owner-managers and self-employed, by directly asking if the respondents are the directors of their own business.⁸ We use the FRS from 1996–97 to 2016–17.

Due to the nature of the FRS data, the years that we refer to in the text and figures are financial years. We also only look at working-age people, i.e. those aged 16 up to the state pension age (SPA).⁹

In addition, due to no information prior to 2002–03 in the FRS on Northern Ireland, this analysis will focus solely on Great Britain.

2.2 Trends for those working for their own business

Figure 2.1 shows, similar to Figure 1.1, a recent rise in the proportion of the workforce who are undertaking any work for their own business: from 12.0% in 2000 to 14.6% in 2016 (FRS) and from 8% in 1975 to 15.1% in 2016 (LFS).

Figures 2.2 and 2.3 decompose the trend observed in Figure 2.1 into those who are self-employed (unincorporated) and those who are company owner-managers (incorporated), respectively.

Figure 2.2 presents the evolution of the self-employed as a percentage of the workforce. In the FRS data, following a short decrease over the period from 1996 to 1999 (of 1.5 ppt, arising from a rise in employment) the proportion of self-employed in the workforce has, since then, remained broadly constant. In contrast, the LFS data suggest that the proportion of the workforce that is self-employed has risen slightly since 1999, especially

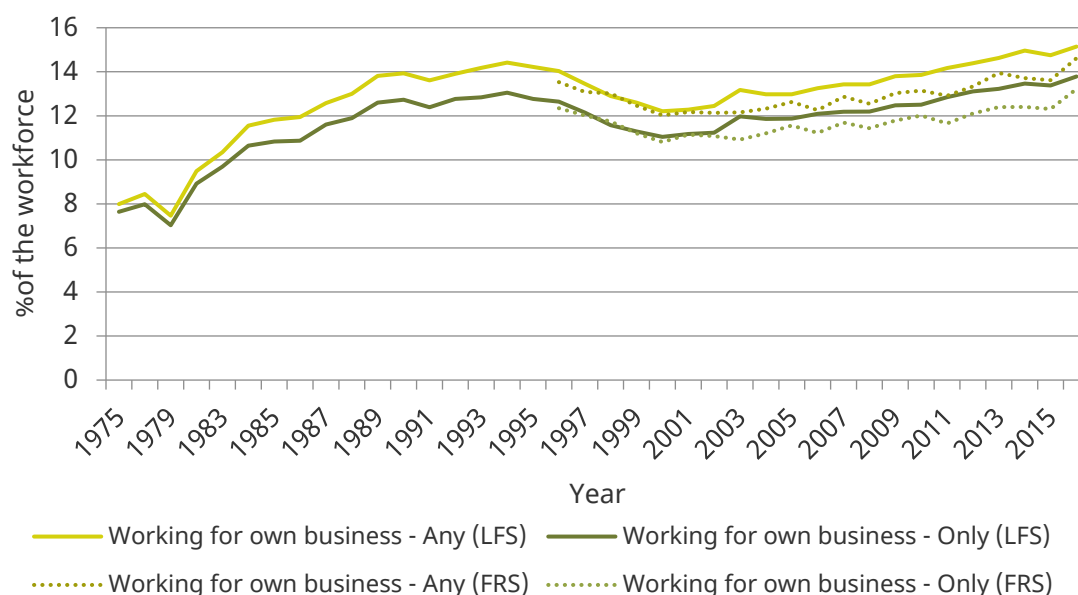
⁷ These definitions are different to those used by the Bank of England and the ONS (for example, as presented in 0), which classify individuals according to their 'main' economic activity. For all of the three legal forms the evolution of the 'main' category closely follows the trends for the 'only' and 'any'.

⁸ This split is not perfect. We divide these two groups using definitions about being a sole director of a business or not. The group that we refer to hereafter as 'self-employed' will unfortunately include some people who are the owners of their own company, but the company has multiple directors.

⁹ In 2016–17, the SPA for men was 65, while for women it was rising from 63 to 64.

when considering the proportion of the workforce engaged in any self-employment (12.3% in 1999 rising to 14.2% in 2016).

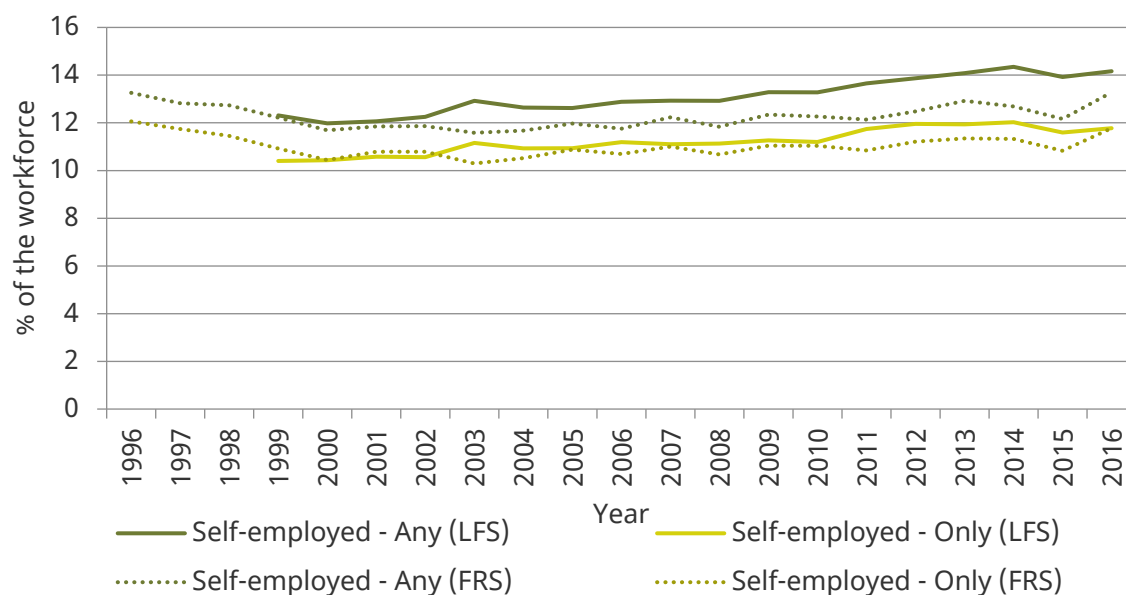
Figure 2.1. Proportion of workforce working for own business in Great Britain



Note: Includes only working-age individuals.

Source: Authors' calculations using the LFS 1975–2016 and FRS 1996–2016.

Figure 2.2. Proportion of workforce self-employed in Great Britain



Source: Authors' calculations using the LFS 1999–2016 and FRS 1996–2016.

Figure 2.3 presents the evolution of owner-managers since 1996. This shows a more marked increase than seen for the self-employed (as shown in Figure 2.2), with the proportion of owner-managers in FRS data almost five times higher in 2016 than in 1996. All of the increase in the proportion of owner-managers has occurred post-2000 (between 1996 and 1999, when the proportion of self-employed decreased, the proportion of owner-

managers remained around 0.3%). However, because of a much lower initial number of owner-managers, the growth since 2000 only accounts for a 1.2 ppt increase in the proportion of the overall workforce working for their own business.

Figure 2.3. Proportion of workforce who are owner-managers in Great Britain



Note: We could not introduce the only sole-owners in the LFS due to the nature of the questions asked.

Source: Authors' calculations using the LFS 1999–2016 and FRS 1996–2016.

Over time, the composition of those working for their own business has changed due to a greater increase in numbers of owner-managers than of self-employed. In 2000 FRS data, approximately 3% of those only working for their own business were owner-managers. By 2016, this figure had reached just over 11%. This almost four-fold rise in the proportion has significant implications for the average state pension entitlements of the self-employed due to owner-managers' higher incomes and differences in how they are treated by the state pension system.

Overall, just over half of the post-2000 increase in the proportion of those only working for their own business is due to the rise in self-employment (1.4 ppt), the remainder (1.2 ppt) being due to the rise in owner-managers.

2.3 Characteristics of those working as employees, self-employed and owner-managers in 2016

There are some notable differences between the typical characteristics of employees, the self-employed and owner-managers, as shown Table 2.1. Owner-managers are much more likely to be men, to have left education later (with a higher education degree) and to be aged 35 or older. They are also the group with the highest proportion working full-time and the highest average (median) earnings. However, there is much higher dispersion in earnings among this group; as can be seen from the difference between annual earnings

at the 25th and 75th percentiles. Although owner-managers' average (median) earnings are higher than those of employees, their 25th percentile earnings are just around half of the equivalent figure for employees.

Table 2.1. Characteristics of the employed, self-employed and owner-managers in 2016

<i>Characteristic</i>	<i>Employees</i>	<i>Self-employed</i>	<i>Owner-managers</i>
Male	51%	67%	73%
Aged 16–34	39%	23%	15%
Aged 35–49	35%	39%	48%
Aged 50–SPA	26%	38%	37%
Proportion receiving Child Benefit for a child younger than 12	16%	10%	9%
Works full-time	75%	73%	85%
Age left education: 16 or earlier	34%	39%	30%
Age left education: 17–18	26%	23%	21%
Age left education: 19 or older	40%	38%	49%
10 th percentile annual earnings	£6,700	£0	£0
25 th percentile annual earnings	£13,000	£4,800	£6,100
Median annual earnings	£21,700	£12,000	£25,000
75 th percentile annual earnings	£33,700	£23,900	£47,900
90 th percentile annual earnings	£50,000	£36,200	£100,800

Note: This table presents data for those that are only employees, only self-employed or in any owner-manager work. We analysed the 'any' category of the latter due to issues regarding the reliability in the LFS of defining the 'only' owner-managers category. Note that unlike employees, self-employed sole-traders and owner-managers are able to make a loss (have negative income) or make no profits (income) at all.

Source: Authors' calculations using the FRS and LFS 2016.

Employees are more likely to be in receipt of Child Benefit (16% compared with 10% for the self-employed and 9% for owner-managers), which can be explained by the higher proportion of women in this group (as the vast majority of Child Benefit recipients are women, comprising 94% of Child Benefit recipients in the FRS in 2016) and the higher proportion of younger people.¹⁰

¹⁰ Child Benefit is a benefit payment received by one of the parents of a child/teenager. In most of the cases, the mother is receiving it, although any parent can claim it.

Fewer of the self-employed are women (33%) than are employees (49%), whereas owner-managers are the least likely to be female (27%). The self-employed are, on average, older than employees and slightly younger than owner-managers. At the same time, the self-employed are the most likely group to be in part-time work (26%) and to have left education before or at the end of compulsory education (39%). Both of these factors can help explain the lower earnings of self-employed sole traders. Only half of those only self-employed report earning more than £12,000 per year.

For some, self-employment will only be a short-term economic activity, whereas others will be self-employed for much (or all) of their working life. Some evidence for this is presented in Table 2.2, which shows the number of years that the self-employed in 2016 and 2017 have been continuously self-employed. As expected, those who are older have a higher probability of being self-employed for a longer time: on average, the self-employed who are aged 50–SPA have been self-employed continuously for 14 years, compared with seven years among those aged 35–49 and three years among those aged 16–34. Within the oldest age group, there is considerable variation in the amount of time spent in self-employment: one-quarter have been self-employed for 26 years or longer, while one-quarter have been self-employed for five years or less.

Table 2.2. Job tenure of the self-employed individuals (years)

<i>Self-employed characteristic</i>	<i>Aged 16–34</i>	<i>Aged 35–49</i>	<i>Aged 50–SPA</i>
25 th percentile 2016	1	3	5
Median tenure 2016	3	7	14
75 th percentile tenure 2016	5	13	26

Source: Authors' calculations using the LFS 2016.

The average job tenure of self-employed individuals has not substantially changed over time. In 2007, although the median tenure for those aged 16–34 (the only group with lower median job tenure than in 2016) was two years, compared with three years in 2016; the mean was 3.6 years, compared with 3.8 years in 2016. For other age groups, there is either a small increase, or no change, in the average (both mean and median) over time. This means that the increasing prevalence of self-employment in recent years has not solely been driven by an increased in-flow into self-employment (as this would reduce average durations) but it must also be arising from a reduced out-flow from self-employment.

Finally, we present data on how self-employment incomes have evolved over time. As shown in Figure 2.4, average (median) self-employment profits were, by 2016, lower in real terms than two decades earlier. This is because, having risen from £13,000 in 1997 to £16,200 in 2001, average profits subsequently dropped back to £12,400 in 2016. This decline in average real profits is remarkable, given long-run trends of earnings growth over time. The 25th percentile of profits did not decline as much following the financial crisis and associated recession, and by 2016 were running at £6,000 compared with £4,800 in 1997.

There are some differences between the FRS data on self-employed earnings and the data recorded in the HM Revenue and Customs (HMRC) self-assessment data. A comparison of our results with those from an earlier Institute for Fiscal Studies (IFS) analysis of self-assessment records shows that average self-employment profits are around £4,000 higher, on average, according to the FRS rather than the HMRC administrative data.¹¹

Figure 2.4. Evolution of the 25th percentile and median profits for the self-employed, over time (2016 prices)



Note: Inflation is adjusted for using the consumer price index.

Source: Authors' calculations using the FRS 1998–2016.

There are a number of reasons why the FRS shows higher self-employed profits than the self-assessment data. First, the analysis of HMRC data includes those who are both self-employed and employed at the same time, and this is a group that is likely to have lower than average self-employment profits. Second, previous IFS research of random audit data shows that almost 60% of the self-employed under-report their income on their tax returns.¹² The scale of the under-reporting is non-trivial and could explain a large amount of the difference between the FRS and self-assessment figures. Fourth, the HMRC data split out partners from sole-traders (which we do not do because of data constraints), and partners are much higher earners, on average, than sole-traders.

¹¹ Cribb et al., 2019.

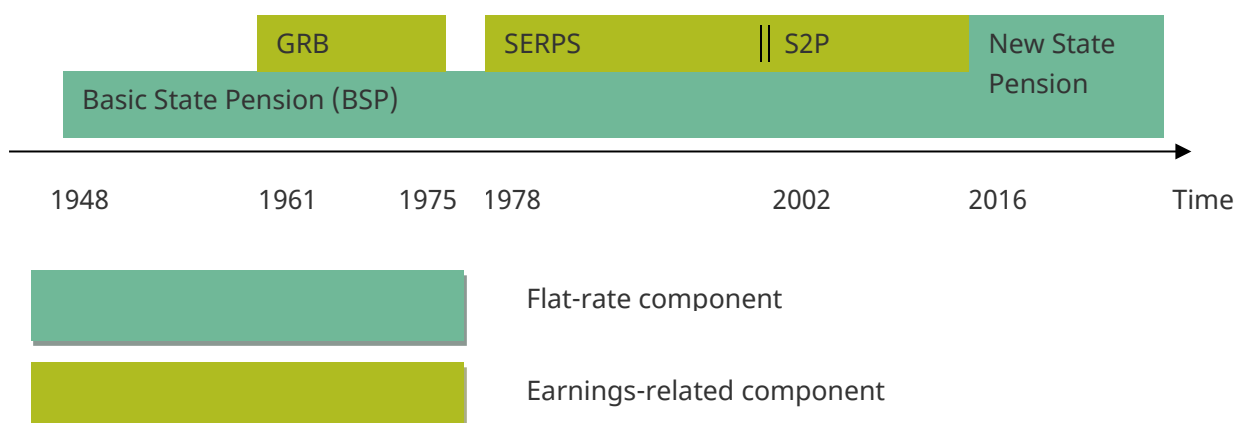
¹² Advani, 2017.

3. The state pension system and the self-employed

In this chapter, we examine how self-employed people accrue entitlement to the state pension in the UK. We describe the changes in the state pension system over time, from its commencement in 1948 to its last major reform, the introduction of the new state pension in 2016.

Although we mainly focus on the self-employed, we also summarise how the different changes affect employees. There are two main reasons for this. First, many self-employed individuals spend part of their working life as employees, and thus changes in the rules for accruing state pension for employees will also affect them. Second, it is useful to illustrate how different kinds of workers receive different entitlements from the state pension system. The aim of this chapter is to understand both the basic rules for accruing entitlement to the state pension for different categories of workers and the major changes regarding calculation rules and activities that build pension entitlement.

Diagram 3.1. A brief summary of the UK pension system components over time



Note: GRB stands for Graduated Retirement Benefit, SERPS for State-Earnings-Related Pension Scheme, and S2P for State Second Pension.

Diagram 3.1 summarises the major changes of the UK pension system since the middle of the twentieth century. We now provide a brief discussion of how the Basic State Pension (BSP), Graduated Retirement Benefit (GRB) and State-Earnings-Related Pension Scheme (SERPS) components of the UK pension system operated from 1948 to 2001 (Section 3.1). We then examine more recent changes to the BSP and the introduction of the State Second Pension (S2P) that occurred over the period 2002–15 (Section 3.2). Finally, we turn to describe the new state pension that has been in place since 2016 (Section 3.3).

3.1 Eligibility only towards the Basic State Pension (1948–2001)

From 1948 to 2001, a self-employed individual could only build entitlement towards the BSP. This was first introduced in 1948, through the National Insurance Act 1946. It provided a flat-rate benefit to pensioners who had reached SPA (60 for women and 65 for

men) having made enough National Insurance contributions. In the UK, early access to state pension benefits before the SPA is not allowed.

The amount of BSP that a pensioner receives is a function of how many years that person is considered to have contributed or done creditable activities (called 'qualifying years').¹³ The majority of individuals accrued towards BSP through paying Class 1, 2 or 3 National Insurance Contributions (NICs).

NICs are a tax on earnings, payable if a worker's income is above a (fairly low) threshold. The rates to be paid and the thresholds are distinct for different workers. There are four NIC classes: Class 1 contributions are paid by employees, Class 2 (flat amount) and Class 4 (earnings-related) contributions are paid by self-employed workers and Class 3 contributions are voluntary contributions that individuals can make to increase their number of qualifying years. Owner-managers are considered to be Class 1 contributors. This is because owner-managers can lower their tax bill by paying themselves as an employee at the Lower Earnings Limit (LEL),¹⁴ and taking the rest of their income as dividends from their company.

Employees accrue Class 1 contributions if they have earnings above the LEL – though in recent decades they only actually pay contributions if they earn above the Primary Earnings Threshold.¹⁵ The LEL was £112/week in 2016, equivalent to £5,824/year. The self-employed must pay Class 2 contributions if they earn over the Small Profits Threshold (SPT), and must pay Class 4 contributions if they earn over the Lower Profits Limit (LPL). Those earning below the SPT can choose to voluntarily pay Class 2 contributions (and this is cheaper than paying Class 3 contributions). The SPT is based on annual income (SPT was £5,965/year in 2016).¹⁶ So the levels of the SPT and LEL thresholds are similar, though it is rather odd that they are not aligned.

The BSP also offers qualifying years for those doing certain creditable activities or receiving certain benefits. We define these as secondary channels for qualification. They include: receiving unemployment and incapacity benefits, maternity pay, or certain tax credits benefits (such as Working Families Tax Credits from 1999 until 2003 and Working Tax Credits after 2003, which both were common among the self-employed earning below the SPT¹⁷) or being on some training courses.¹⁸

During this period, the full amount of BSP was awarded if creditable activities or contributions are made at least in 44 years for men and 39 years for women (which

¹³ This is subject to another rule (first contribution condition) that was in place before 1975 and meant that an individual has to pay at least 156 weeks NICs in any class to receive any state pension. After that, just 52 weeks were needed, but in the same tax year.

¹⁴ See Adam et al. (2017, p. 13).

¹⁵ See Bozio et al. (2010, p. 15).

¹⁶ The rules for accruing a qualifying year have changed slightly over time, meaning that prior to 1976 the number of qualifying years is equal to the total number of weeks in which an individual has paid Class 1, Class 2 or Class 3 contributions divided by 50. Between 1976 and 1978, an employee or self-employed individual was required to pay contributions equivalent to an income 50 times the LEL (£112/week in 2016) and after 1978 the required number of weeks had changed to 52 (Crawford et al., 2010, p. 15).

¹⁷ The Small Profits Threshold has previously been called the Small Profits Exception.

¹⁸ Many of these creditable activities are available only for those retiring after 2010 (but for all of their years of work retroactively).

represent approximately 90% of normal working life). The final pension amount that an individual receives, if contributing less than this period, is a pro-rata amount of the full BSP rate, proportional to the number of qualifying years. Thus, if, for example, a woman contributes for 20 years of her life, she will receive 20/39 of the full amount.

In 1978, one of the biggest reforms was the introduction of the Home Responsibilities Protection (HRP), which could reduce the requisite number of qualifying years needed to receive the full amount.¹⁹ Each year at home meant one less year was needed for the full BSP if the individual was a foster parent, was looking after children under 16 or, in certain circumstances, caring for a disabled person. Therefore, if the aforementioned woman was not in paid work, received Child Benefit and took care of a child under 16 since 1979, for 20 years of work she could receive 20/23 of the full BSP amount.

Throughout period from 1948 to 2001, in order to receive any state pension, an individual was required to be entitled to at least 25% of the full BSP. For example, a man with a regular working life (and not protected by HRP) would have to contribute for at least 11 years, and a woman approximately 10 years, to be entitled to any state pension.

Over time, a number of earnings-related components to the state pension were introduced. The role of these was to supplement the pension income of employees, especially those who did not benefit from an occupational or workplace pension. Between 1948 and 2001, none of the earnings-related pension benefits was available for self-employed workers.

Graduated Retirement Benefit (1961–75) was introduced through the National Insurance Act 1959 and was the first earnings-related element of the state pension in the UK. It was designed for those employees paying Class 1 contributions, earning above a certain threshold and who paid extra ‘graduated’ contributions. The total possible benefit for an individual who received all of the possible credits and was paying Class 1 contributions in all years was very low: Bozio, Crawford and Tetlow (2010, p. 34) calculate that their value in 2010–11 prices is £9.92/week.

The *State-Earnings-Related Pension Scheme (1978–2001)* was introduced through the Social Security Act 1975 and started three years after the end of the GRB scheme. Similar to GRB, it was designated just for Class 1 contributors earning above the LEL. This scheme automatically gave credits on ‘surplus earnings’ defined as above the LEL and below an Upper Earnings Limit (UEL, £827 per week in 2016). No additional contributions beyond paying Class 1 contributions were needed to accrue the right to SERPS but it was possible for the employees to ‘contract out’ into a workplace pension scheme (and therefore not accrue the right to SERPS), in return for paying lower Class 1 NICs.

While this scheme was originally very generous to employees, over time the scheme was cut back substantially. The original system provided 25% accrual of ‘surplus earnings’ averaged over the best 20 years of working life, indexed in line with the maximum of growth in growth earnings and in prices. The generosity was cut in stages, to a system where accrual was 20% of earnings averaged across all years of working life (including

¹⁹ Potentially to as few as 20 years for women and 22 for men.

those with no earnings) with indexation of pensions in payment set in line with retail price index (RPI) price inflation.

3.2 Eligibility towards the Basic State Pension and the State Second Pension (2002–15)

From 2002 to 2015, the BSP system remained in place, with similar rules for accruing a qualifying year for those in paid work as in previous periods. (The HRP system was, however, replaced with a National Insurance ‘credits’ system, which was more generous to those not in paid work.) However, there is one reform with potentially big implications for the self-employed: in 2010, the number of years required to gain a full BSP dropped to 30 years for both men and women, from 44 and 39, respectively, and the minimum number of qualifying years required to receive any BSP amount was abolished. As a consequence, from 2010, gaps in individuals’ contribution records are punished much less by the system. If a self-employed person (or an employee) had a small number of years out of work or in which they earned below the SPT/LEL, then this may no longer have affected their entitlement at all.

The period from 2002 to 2015 also brought a big reform of the earnings-related component of the state pension, namely the replacement of SERPS with the State Second Pension (S2P). The S2P was primarily designed for those paying Class 1 contributions, but a number of self-employed could accrue a part of the S2P pension benefits under certain conditions. The S2P protected the amounts that individuals had already earned through SERPS, and also kept in place the possibility of contracting out.

There are two key differences between the S2P and SERPS:

- First, the S2P splits the income between LEL and UEL into three different bands, for which the accrual rate differs so that the system is made more generous for lower earners (initially, for the lower band the accrual rate was two times higher than in SERPS, for the middle band it was half of the SERPS rate and for the highest band, S2P started with the same accrual rate as SERPS). For the purposes of this band division, two new thresholds were introduced: the Lower Earnings Threshold (LET) splits band 1 and band 2, and the Upper Earnings Threshold (UET) splits band 2 and band 3.
- Second, those with low earnings or fulfilling certain conditions are treated as though they have earnings equivalent to the LET. In the original form of the S2P, this applied to those earning between the LEL and the LET, those on invalid care allowance, those caring for a child younger than 6 or a sick/disabled person and those entitled to long-term incapacity benefit.²⁰

These final changes in the eligibility criteria meant that for the first time some self-employed workers could have access to second-tier state pension benefits. From April 2002 to April 2010, the self-employed receiving Child Benefit for a child younger than 6 could accrue entitlement equivalent to earning at the LET. From April 2010 and until the introduction of the single-tier pension in 2016, a self-employed individual receiving Child Benefit for any child younger than 12 would accrue entitlement to S2P. If a self-employed

²⁰ See Bozio et al. (2010, p. 39).

individual did not receive Child Benefit in this period, but their partner did, the legislation offers the possibility of transferring retrospectively the Child Benefit credits towards their own S2P entitlement rather than that of their partner.

3.3 The new (single-tier) state pension (2016 onwards)

In 2016, the government replaced the old pension system – with its BSP component and historic collection of earnings-related components – with a new single-tier state pension. As is implied by the ‘single-tier’ label, the new state pension does not have an earnings-related component. This reform was introduced through the Pensions Act 2014.

The full new state pension has a higher value than the full BSP amount, but a lower value than what could be accrued through combined BSP and S2P. In 2016, the full BSP amount was £119.3/week of pension and the full new state pension was £155.65/week.

The government has protected state pension rights that had already been accrued under the old system. The calculation of the new state pension starts building from a ‘starting amount’, which is the higher of the pension accrued under the old system by 2016 and the amount that would have been accrued if the new state pension was in place prior to 2016. If the starting amount is higher than the full new state pension, the individual can no longer accrue additional pension, regardless of their future activities or NICs. If their starting amount is less than the full new state pension, then they will accrue entitlement to an additional $1/35^{\text{th}}$ of the full amount for each additional qualifying year in future.

In the short run, the protection of existing entitlements means that few individuals lose from the introduction of the new state pension. Crawford, Keynes and Tetlow (2013, p. 34) estimated that just 19% of the individuals who will reach their SPA between April 2016 and 2020 will have a lower pension income as a result of the reform, and those who lose are primarily affected by the reintroduction of a minimum number of contributory years (10) in order to gain any entitlement. However, in the long run, most individuals would accumulate a lower state pension income in retirement under the new system, as the level of the full new state pension is lower than the combined level of BSP and S2P.

As a result of the introduction of the new state pension, there is one particular group that generally saw an increase in their entitlement, in both the short and long term: those who accrue BSP entitlement but have very low earnings-related pension benefits. This group mainly comprises the self-employed.²¹

It is important to note that not all of the self-employed will have a greater state pension income in retirement as a result of the reform. Those who have significant periods in employment, with S2P and SERPS entitlement accrued,²² and those who have fewer than 10 years of contributions, will generally lose.

²¹ It also includes those who contract out (Crawford et al., 2013, p. 19).

²² This is provided that they still work, because if they have a foundation amount higher than the single-tier amount, they cannot accumulate further entitlement.

3.4 Summary

Table 3.1 summarises all of the basic rules for accruing state pension while in work, for the period 1948–2016. The table provides just a general picture and is not meant to be exhaustive. We exclude any rules that have a small impact on the number accruing qualification, such as carer's allowance.

Throughout most of this period, the existence of an earnings-related component, which is not typically accrued by the self-employed, means that the self-employed accrue a lower state pension for a given year of work than other workers. However, this does not necessarily imply that the state pension system is less 'generous' towards the self-employed, as they also pay lower NICs. This picture was changed dramatically in 2016, as the new single-tier state pension equalised the treatment of different kinds of paid work (with, as yet, no change in their required NICs).

Table 3.1. Basic rules for accruing a qualifying year of state pension while in work

<i>Flat-rate component (BSP/single-tier pension)</i>	<i>Earnings-related component (GRB, SERPS, S2P) [1961–2015]</i>
Class 1 contributors (employees/owner-managers) <ul style="list-style-type: none"> • earns above LEL (£112/week in 2016; equivalent to £5,824/year) • had a child under 16 and received CB in any given year before 2010 (under 12 afterwards) and reaches SPA after 2010 	<ul style="list-style-type: none"> • various earnings rules, usually must earn above LEL • only S2P: if received CB for a child under 6 before 2010 (under 12 afterwards)
Class 2 contributors (self-employed) <ul style="list-style-type: none"> • earns above SPT (£5,965/year in 2016) • had a child under 16 and received CB in any given year before 2010 (under 12 afterwards) • received WFTC (before 2003) or WTC (after 2003) 	<ul style="list-style-type: none"> • only S2P: if received CB for a child under 6 before 2010 (under 12 afterwards)
Class 1 and 2 contributors (at the same time) <ul style="list-style-type: none"> • satisfies either of the Class 1 or Class 2 conditions 	<ul style="list-style-type: none"> • satisfies either of the Class1 or Class 2 conditions

Note: LEL, Lower Earnings Limit; SPT, Small Profits Threshold; CB, Child Benefit; WFTC, Working Families Tax Credit; WTC, Working Tax Credit.

4. The evolution of UK state pension coverage

This chapter examines the evolution of UK state pension coverage, by which we mean the number of people who are accruing qualifying years through NICs and the most important creditable activities such as receiving Child Benefit.

It is important to note that this chapter does not include data on voluntary contributions and we are also not directly measuring the amount of state pension income that individuals are accruing entitlement to (this is covered in Chapter 5).

The main reason for not including voluntary contributions is that making a voluntary contribution is essentially an individual's saving decision. At the same time, we do not have available data to measure the extent of the voluntary contributions for the self-employed. However, by looking at comparable data for employees and owner-managers, we believe it is highly unlikely that the numbers of self-employed deciding to pay voluntary contributions are high. Only a small proportion of those out of work or paying Class 1 contributions also make voluntary contributions: in 2016, the government estimated that it would receive £36 million in receipts from Class 3 contributions,²³ meaning that it expects that approximately 50,000 people out of work, employees and owner-managers will pay voluntary Class 3 contributions.

Because the data our analysis is based on consist of repeated cross-sections of the British population, not longitudinal data, we are not able to observe the history of people's qualifying activities. This is important. If individuals spend only very few years not accruing a qualifying year, then it may not affect their state pension entitlement, given that only 35 qualifying years are needed for a full new state pension. However, if some self-employed people spend many years not undertaking qualifying activities, then the proportion of the self-employed not receiving the full new state pension would be higher.

4.1 Fulfilling the conditions for accruing a qualifying year towards the single-tier pension in 2016

In this section, we first analyse the numbers and proportions of different types of workers who accrue a qualifying year towards the state pension in 2016. We will then split the Class 1 contributors, such that we can analyse the difference between employees and owner-managers. As discussed above, owner-managers are considered to be Class 1 contributors, i.e. employees of their own incorporated businesses.²⁴

Table 4.1 shows the proportion and number of individuals that in 2016, while in paid work, (i) do not qualify, (ii) qualify through their earnings and (iii) qualify through receiving Child Benefit or Working Tax Credits. It is split by which type of NICs they make. Class 1 contributors are the most likely to accrue a qualifying year, with only 5.4% not obtaining

²³ Seely, 2017, p. 6.

²⁴ This may not be entirely correct, but given that owner-managers have a relatively high average level of education, they are more likely to be in full-time work and earn more (and, thus, more likely to think about tax advantageous ways of drawing money). We believe this is a reasonable assumption.

any type of qualification in 2016. Coverage is lower for both those only self-employed (Class 2 contributors), with 19% not qualifying, and for those that are eligible to pay both Class 1 and Class 2 contributions, of whom 9% do not qualify. Put another way, of those not accruing a qualifying year, two-thirds are only employees and 31.5% are only self-employed.

Table 4.1. The proportion and absolute numbers of Class 1, Class 2 and Class 1 and 2 contributors who accrue a qualifying year towards the single-tier pension in 2016

<i>Working status</i>	<i>Qualification status</i>	<i>Percentage</i>	<i>Number</i>
Employees and owner-managers (potentially making Class 1 contributions)	Do not qualify	5.4	1,380,000
	Qualify via earnings	92.9	23,500,000
	Qualify via CB, not earnings	1.7	440,000
	Total	100.0	25,320,000
Self-employed (only) (potentially making Class 2 contributions)	Do not qualify	18.9	650,000
	Qualify via earnings	75.1	2,580,000
	Qualify via CB/WTC, not earnings	5.9	200,000
	Total	100.0	3,430,000
Employees/owner managers and self-employed (potentially making both Class 1 and 2 contributions)	Do not qualify	8.8	40,000
	Qualify via earnings	88.8	390,000
	Qualify via CB/WTC, not earnings	2.4	10,000
	Total	100.0	440,000
Total working-age workforce (Great Britain, 2016)	Do not qualify	7.1	2,070,000
	Qualify via earnings	90.7	26,470,000
	Qualify via CB/WTC, not earnings	2.2	640,000
	Qualify total	92.9	27,110,000
Total employed, 2016		100.0	29,180,000

Note: Those that have both an eligible income and Child Benefit (CB) are included in the 'Qualify via earnings' category. The CB qualification is awarded if the person is receiving CB and has a child younger than 12. WTC stands for Working Tax Credits.

Source: Authors' calculations using FRS 2016.

The majority of workers accrue a qualifying year towards the state pension based on their earnings being above the LEL/SPT. However, a significant number qualify through secondary channels: 1.7% of Class 1 contributors (employees and owner-managers), 6% of the Class 2 contributors (self-employed) and 2% of Class 1 and 2 contributors. The proportion of self-employed qualifying through secondary channels is higher than the equivalent figure for the other forms of paid work for two main reasons. First, they can also gain qualification via tax credit receipt (3% accrue towards the single-tier pension only due to WTC). Second, a higher number of the self-employed do not qualify through earnings, which means they are more likely to qualify through receipt of Child Benefit.

Out of the smaller group of workers who are eligible to pay both Class 1 and Class 2 contributions, 89% qualify just through earnings. A plurality (44%) qualifies just through Class 1 contribution rules (i.e. employee earnings being above the LEL), while only 12% qualify just through Class 2 (i.e. self-employed profits being above the SPT). The remaining workers (32%) qualify through both Class 1 and Class 2 contributions. The higher proportion of workers who qualify through Class 1 contributions is mainly explained by the fact that those that are both Class 1 and 2 contributors are generally working as employees in their main job and have a secondary job as self-employed.

Overall, in 2016, about 93% of the total working-age workforce accrued a qualifying year towards the state pension, leaving 2.1 million working individuals not accruing any entitlement.

Table 4.2 takes those who could make Class 1 contributions and splits them by whether they are an owner-manager or an employee. Owner-managers are less likely to qualify than other employees. This is because owner-managers are more likely to have very low earnings than more typical employees (shown in Table 2.1). Owner-managers are, however, still slightly more likely to accrue a qualifying year than the self-employed (86% and 81%, respectively). The difference between their respective earnings' qualification (84% for company owner-managers and 75% for the self-employed) is partially offset by the higher proportion of self-employed accruing qualification through secondary channels (2% and 6%, respectively).

We now have a good picture of those who accrue a qualifying year towards the new state pension in 2016. Out of the 29.2 million working-age workforce in Great Britain, approximately 27.1 million accrue a qualifying year towards the single-tier pension and 2.1 million do not. Those who do qualify are mainly only employees (87%), with the remaining 13% being split between the only self-employed (10%), owner-managers (1%) and those who are both Class 1 and 2 contributors (2%).

The 2.1 million workers that do not qualify are also mainly employees (64%) but contain a much higher share of the self-employed (32%) and owner-managers (3%).

Table 4.2. Breakdown of Class 1 contribution category

<i>Working status</i>	<i>Qualification status</i>	<i>Percentage</i>	<i>Number</i>
Employees	Do not qualify	5.3%	1,320,000
	Qualify via earnings	93.0%	23,170,000
	Qualify via CB, not earnings	1.7%	430,000
Total		100.0%	24,920,000
Owner-managers	Do not qualify	14.0%	60,000
	Qualify via earnings	84.0%	330,000
	Qualify via CB, not earnings	2%	10,000
Total		100.0%	390,000

Note: Those that have both an eligible income and Child Benefit (CB) are included in the 'Qualify through earnings' category. The CB qualification is awarded if the person is receiving CB and has a child younger than 12. This table includes only owner-managers and only employees. Numbers rounded to the nearest 10,000.

Source: Authors' calculations using FRS 2016.

4.2 Evolution of the proportion of individuals fulfilling the conditions for accruing a qualifying year

In this section, we briefly examine the recent evolution of the proportion of workers accruing a qualifying year. For brevity, we focus on those people 'only' employees and 'only' self-employed.

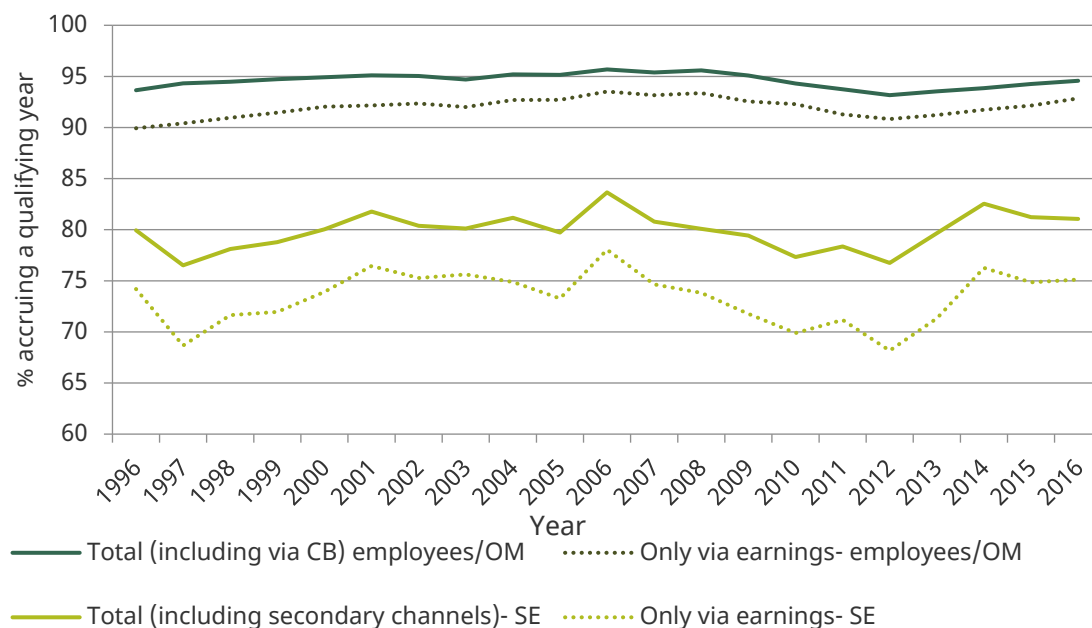
Overall, there are now slightly more people who do not accrue a qualifying year towards the state pension. In 2000, before the recent rise in the proportion of self-employed started, 6.7% of the working-age workforce (1.7 million individuals) did not accrue a qualifying year. In 2007, just before the start of the financial crisis, the proportion dropped to 6.2% (also 1.7 million individuals). Both proportions are lower than the 2016 figure of 7.1%, when 2.1 million individuals did not accrue a qualifying year. The Appendix provides a full breakdown of those that fulfil the conditions for qualifying, and those that do not, in 2007 and 2000.

Figure 4.1 examines the evolution over time in the proportion of those who are only employees/owner-managers, and the proportion of those who are only self-employed, who accrue qualifying years.

The top two lines of Figure 4.1 present the proportion of employees/owner-managers accruing a qualifying year in our data, with and without taking account of qualification via

receipt of Child Benefit.²⁵ In this figure, we clearly distinguish three periods: the first period is represented by the period before the financial crisis in which the earnings of employees/owner-managers are gradually rising and thus more people are earning above the LEL (from 90% in 1996 to 93% in 2007). The financial crisis and its aftermath hit the incomes of the employees and reduced the proportion earning above the LEL to a low of 91% in 2012. However, since then, the proportion of potential Class 1 contributors accruing a qualifying year has gradually risen, although not quite back to the pre-crisis (2007) levels.

Figure 4.1. Proportion of only self-employed and only employees and company owner-managers accruing a qualifying year in Great Britain



Source: Authors' calculations using the FRS 1996–2016. SE and OM denote self-employed and owner-manager, respectively.

The lower two lines in Figure 4.1 show the proportion of the only self-employed accruing a qualifying year from 1996 to 2016. These series are more volatile, which can be explained by the lower sample size. However, the trends are similar to the one observed for Class 1 contributors. Compared with 1996, a slightly higher proportion earns above the SPT in 2016 (75% in 2016 versus 74% in 1996). In 2016, 81% accrued a qualifying year (including through CB/WTC), which is still lower than the pre-crisis high of 84% in 2006. This is because the incomes of the self-employed have not recovered after the 2007–08 financial crisis, and therefore the proportion accruing a qualifying year has not yet reached pre-crisis levels.²⁶

²⁵ Technically, those accruing qualification via Child Benefit have to retire after 2010 to transform it into entitlement. If they retire beforehand, these years are simply discounted from their working life, as any other HRP years.

²⁶ These findings are in line with our analysis in Section 2 and the findings of previous IFS Research (Cribb et al., 2019) which analysed HMRC Self-Assessment data and found that the sole-traders' median profits in 2015 were 7% lower than in 2007.

In order to have a more complete image of the working-age workforce qualifying over time, we must also analyse those who are eligible to pay both Class 1 and Class 2 contributions. However, they constitute a small group and thus a low sample size in our data. The proportion accruing a qualifying year in 2016 seems, if anything, to be slightly lower than in 2007. For an overall image of this group and an analysis of owner-managers (a similarly small group), two figures – which should be analysed with caution – presenting the proportions accruing a qualifying year since 1996 are presented in the Appendix.

Taking the workforce as a whole, compared with 2007, there were, in 2016, 350,000 more people not accruing a qualifying year even though they are in paid work. Perhaps the obvious reason for a higher *number* of in-work individuals not qualifying is the increase in the overall employment rate and size of the working-age population. However, we also see an increase in the *proportion* of workers who are not qualifying, from 6.2% in 2007 to 7.1% in 2016.

We now examine three possible reasons for this trend, each of which, as it turns out, explains about one-third of the increase in the proportion of workers not accruing state pension entitlement over this period.

The first reason for a higher proportion of workers not accruing a qualifying year is a fall in the proportion of workers earning above the LEL/SPT. This is true for the employees (of whom 95.7% earn above LEL in 2016, down from 96.1% in 2007) and those who are both self-employed and employees (of whom 88.8% earn above either LEL/SPT in 2016, down from 93% in 2007). The proportion of the only self-employed earning above SPT is actually slightly higher in our data in 2016 (75.1%, compared with 74.7% in 2007).

The second reason for the increase in the proportion of workers not qualifying is changes in the number of people accruing qualification for the BSP through secondary channels such as Child Benefit. While we do not observe any major changes in the number of people receiving Child Benefit, the change of legislation in 2010 (offering a qualifying year only to those who have a child younger than 12 instead of to those who have a child younger than 16) has reduced the numbers qualifying. We estimate that, if this change was not in place, in 2016 approximately 80,000 more workers would have gained a qualifying year, accounting for about a third of the rise in the proportion of workers not qualifying between 2007 and 2016.

A third reason for the trend is changes in labour market composition. Even if the proportion of workers within each category who qualify were to remain constant, if the group that has a lower proportion not qualifying becomes relatively bigger, and this would increase the overall number of workers not qualifying. This has been the case, with the recent rise in self-employment, a group that is generally less likely to meet the criteria for accruing a qualifying year.

5. The evolution of the value of a qualifying year over time

In Chapter 4, we examined the proportion of workers who accrued a qualifying year via earnings and the most important creditable activities. In this chapter, we analyse the value of one qualifying year over time, and how this has changed given reforms to the state pension system.

5.1 The generosity of different state pension systems for the self-employed retiring in 2018

The level of state pension income that an individual receives in retirement depends on numerous factors: their SPA and length of working life (which depend on gender and date of birth), what creditable activities they have done and when, and what they have earned and when. These activities have different values under different vintages of the pension system. We start by picking one cohort in order to evaluate comparatively the generosity of different systems.

Figure 5.1 shows the value of one qualifying year for a self-employed man, who started his working life at age 16, has an SPA of 65 years and retires at his SPA in 2018. We assume that this man does not accrue any eligibility to S2P, as when S2P was introduced (2002), he was 49 years old and the only group of self-employed individuals who could accrue entitlement to S2P in that period was comprised of those receiving Child Benefit for a child younger than 6. At the same time, we found that in 2016 approximately 94% of those receiving Child Benefit are women, so it is unlikely that a man would accrue entitlement to S2P.

The horizontal axis shows the potential years of work for this man. On the vertical axis, we measure the potential value (in terms of weekly state pension income in 2018) of doing a qualifying activity in that year.

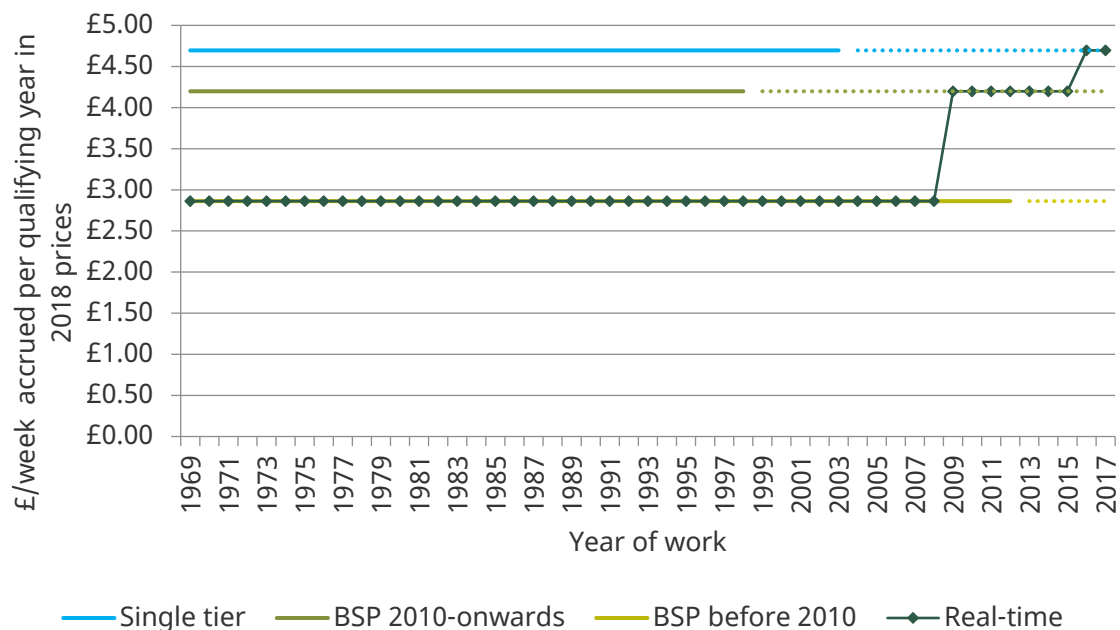
The light blue line represents the value of different years of work (if the self-employed man earned above SPT and/or had any other creditable activities) under the new single-tier state pension system. This line was obtained by dividing the total value of the new state pension in 2018 by the number of years (35) required to receive the full amount. The value of a qualifying year towards the single-tier pension is, for every year of work that counts, £4.70 per week. Once 35 years of working life have elapsed (i.e. from 2004 for a man reaching SPA in 2018), these qualifying years might not add additional entitlement, if the man had already reached 35 qualifying years. This is represented by the dotted line.

If we look now at the value of the BSP before it was replaced by the new state pension (represented by the olive green line), we can observe that, for each qualifying year, accrual is 50p per week lower than the single-tier amount accrued in the same period. This is caused by the fact that the maximum BSP amount is significantly lower than the single-tier amount (almost £40/week in 2018), but slightly offset by a lower number of qualifying years needed in order to receive the full amount, which pushes up annual accrual (35 years for the single-tier pension and 30 for the BSP system from 2010). This is shown in the figure by the 'BSP 2010-onwards' line becoming dotted five years earlier, in 1999. For a

self-employed man who satisfies the minimum number of contribution requirements,²⁷ the single-tier pension is unambiguously more generous than the system it replaced.

The light green line represents the BSP system in place until 2010. This is based on the same full BSP amount as the BSP system introduced in 2010, but the per qualifying year accrual is lower because, prior to 2010, in order to be entitled to the full BSP, 44 qualifying years were needed (this is also shown by the fact that this BSP line becomes dotted only in 2013).

Figure 5.1. Potential value of one year of qualifying activity: a self-employed man reaching SPA in 2018



Note: The value of qualifying years under different pension systems for a self-employed man assuming that, in all years, he earned above the SPT or has done other credited activities. The man has a working life during the period 1969–2017 (started age 16) and retires in 2018. We assume no S2P requirement is fulfilled.

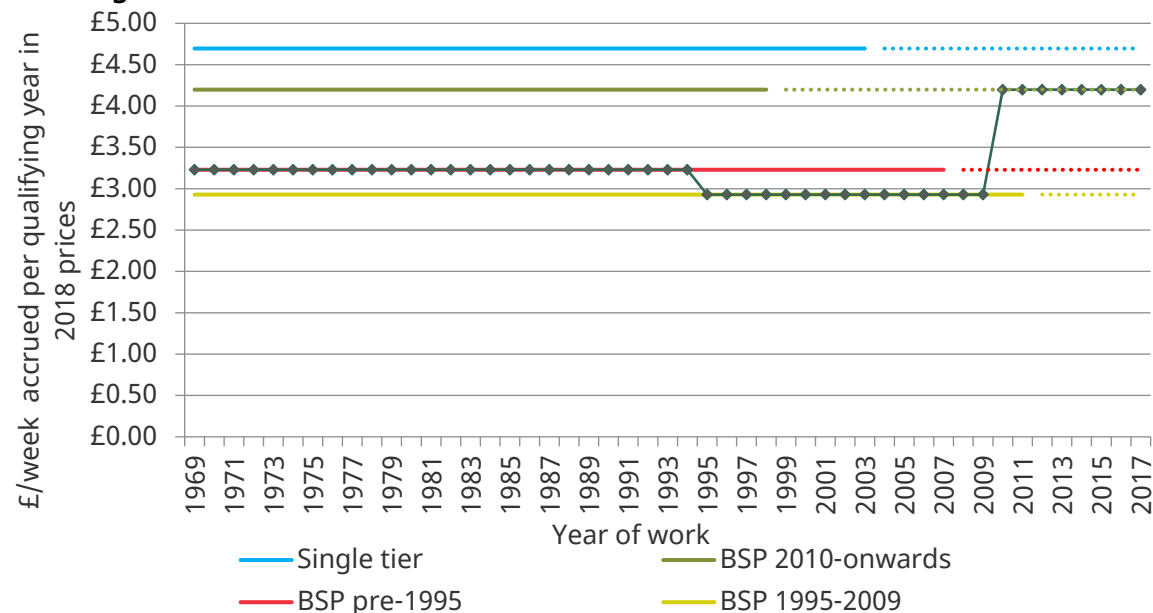
The 'real-time' line shows the value of a year of activity using the contemporaneous rules of the pension system. Over time, the potential value of a year of qualifying activity in terms of state pension accrual has increased for a self-employed man in two steps: after the change of the BSP legislation in 2010 that required only 30 years of work to receive the full amount, and in 2016 once the new state pension was introduced. However, it is important to note that the former of these would not necessarily benefit people with long working lives: a self-employed man with 44 or more years of qualifying activity would have received the same state pension before and after the 2010 reform, and they simply would have accrued entitlement to the maximum amount more quickly under the post-2010 system.

²⁷ These are 10 years for the new single-tier state pension and one year for the BSP system in place after 2010.

Figure 5.2 shows a similar picture for a self-employed woman. Again, we assume S2P requirements are not fulfilled (she has no child aged younger than 6 when she is 49 years old).

The only significant difference²⁸ between Figures 5.2 and 5.3 is represented by the changes generated by the increase in the SPA for women legislated in 1995 (through the State Pension Act 1995). We assume that the representative woman believed that her SPA prior to 1995 was 60 years, and since then she believed her SPA would be 64. Given a higher SPA, the number of qualifying years needed to receive the full BSP amount increased as well. Before 1995, only 39 years of work/credited activities were necessary for a woman to accrue the full BSP amount, meaning that the value of a qualifying year is £3.23 per week (in 2018 prices). In the period 1995–2009, she believed (given the legislated rules of the pension system at that time) that she needed 43 years to receive the full BSP amount, which meant that the value of a qualifying year dropped to a level more similar to that of men (£2.93 per week).²⁹

Figure 5.2. Potential value of one year of qualifying activity: a self-employed woman reaching SPA in 2018



Note: The value of qualifying years under different pension systems for a self-employed woman assuming that, in all years, she earned above the SPT or has done other credited activities. The woman has a working life during the period 1969–2017 (started age 16) and retires in 2018. We assume that no S2P requirement is fulfilled.

Overall, there are three changes that affect the potential value of a year of qualifying activity for a woman retiring in 2018. The first is a drop caused by a higher SPA and a higher number of qualifying years needed to receive the full BSP in 1995. The second is an increase caused by the lowering of the minimum requirement for receiving the full BSP, from 44 to 30 years in 2010. The third is caused by the recent introduction of the single-tier

²⁸ Another small difference arises from the BSP 1995–2009 entitlement representing the full BSP amount divided by 43 years of work (equivalent to an SPA of 64), compared with the men's figure for the period before 2010, which is divided by 44 years of possible work (as the SPA for men was 65).

²⁹ It is worth noting that all women affected by the increase in the SPA legislated in 1995 reached their SPA in April 2010 or later, by which time the number of qualifying years needed for a full BSP had been reduced to 30 years, and the value of a qualifying year increased to £4.20 per week as per the dark green line.

pension. However, the only change affecting the full possible entitlement (for someone with more than 44 years with earnings above SPT or other creditable activities) was the 2016 reform. The changes to the length of working life arising from the SPA increase and the 2010 reform may just affect how quickly women reach the full pension entitlement, rather than their eventual state pension income, if their working life is sufficiently long.

5.2 The generosity of different state pension systems for self-employed women retiring in 2045

In neither Figure 5.1 nor Figure 5.2 did we examine the effect of the S2P, given we took example self-employed individuals reaching the SPA in 2018 who therefore had a low probability of receiving Child Benefit while S2P was in place.

Figure 5.3 shows the value of qualifying years under different pension system for a self-employed woman retiring at her SPA in 2045. This woman was 25 years old when S2P was introduced in 2002. We assume she receives Child Benefit for a new-born child in 2002 and, then, in any year between 2004 and 2008 she had another child. Thus, she will accrue S2P entitlement for the whole period it was in place (2002–15).

In this figure, we only present the lines corresponding to the ‘real-time’ BSP amount, the ‘real-time’ maximum amount (which is technically BSP before 2002, BSP and S2P between 2002 and 2015 and the single-tier pension afterward) and the single-tier pension.

The single-tier pension has a real value under our assumptions (average earnings indexation, rather than triple lock) of £7.84 per week in 2018 prices for every year that counts towards its calculation. The line becomes dotted since 2028, reflecting that 17 years of working life might not accrue any entitlement. The BSP reflects the behaviour discussed earlier, with a small drop after only two years of working life for this woman (from £5.39 per week to £4.89 per week in 2018 prices, reflecting the change towards an SPA of 64 for women), and a significant increase in 2010, due to the changes in BSP legislation (to £7.01 per week in 2018 prices).

The maximum amount (comprising both BSP and S2P) accrued per qualifying year is marginally higher than the single-tier amount prior to the 2010 reform. However, in the period 2010–15, a person receiving Child Benefit for a child younger than 12 thought they would accrue more state pension (per year) than in the period 2016-onwards. The system is less generous in terms of per year accrual for those with young children since 2016, compared with the period 2010–15. However, the S2P amount is not accrued for a long period meaning that this woman could, under normal circumstances, accrue more overall under the single-tier pension, than under the BSP and S2P systems. This picture depends on how many children one woman has, the age gap between the children, and what systems we are comparing. For example, the BSP after 2010 and S2P after 2010 systems (offering S2P entitlement for children under 12) are much more generous than the equivalent systems prior to 2010.

Figure 5.3. Potential value of one year of qualifying activity: a woman reaching SPA in 2045



Note: The value of qualifying years under different pension systems for a self-employed woman assuming that, in all years, she earned above the SPT or has done other credited activities. She retires in 2045, at age 68 and starts her working life at age 16 (1993). Assumed rules for accruing S2P fulfilled: she receives Child Benefit for a new-born child in 2002 and, then, in any year between 2004 and 2008, she had another child. Thus, she can accrue S2P entitlement for the whole period it was in place (2002–15). Assumed average earnings growth indexation.

5.3 The historic values and possible evolution of the value of qualifying years

Until now, we have examined the evolution of the generosity of different state pensions for a fixed cohort. However, the evolution in generosity can also be examined for those reaching the SPA in different years, which will also take into account changes in the level of the full amount of the state pension over time.

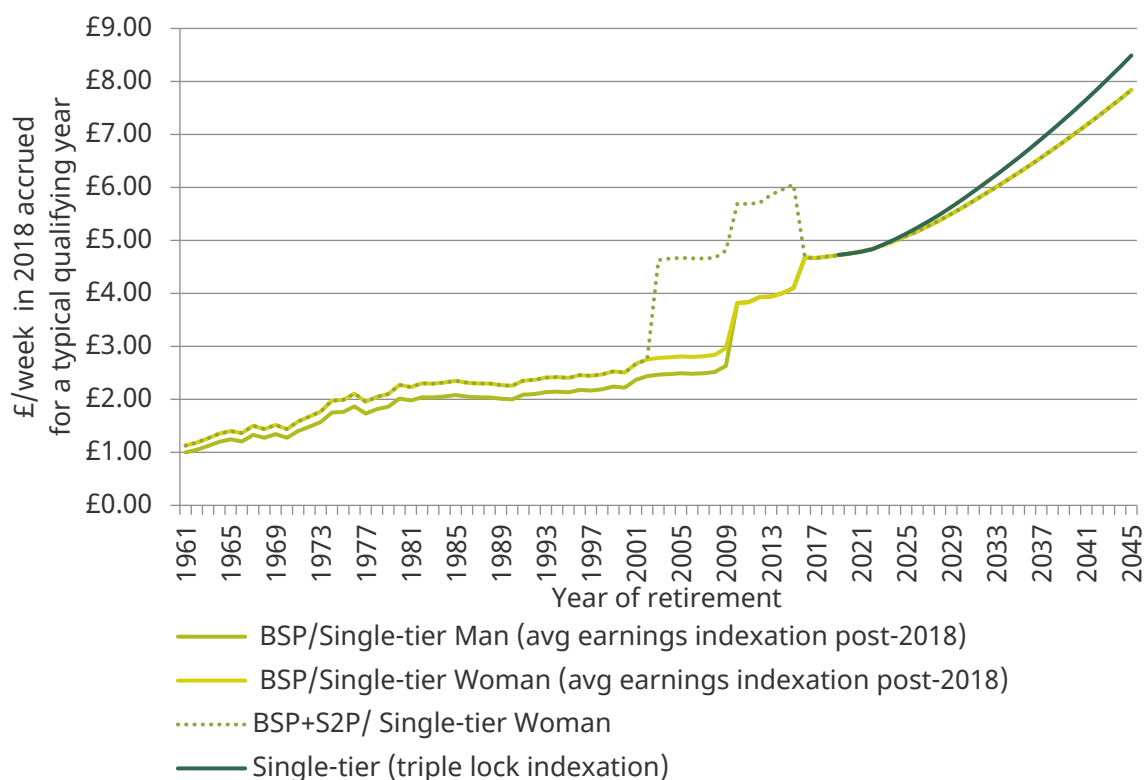
Figure 5.4 presents the evolution of the value of pension possibly accrued in the last year prior to reaching the SPA, for self-employed men and women who fulfil the contribution/creditable activities conditions.

The section plotted until 2018 is based on historic data on the basic rates of state pension and consumer price index (CPI) inflation. For the period until 2045, we project new single-tier state pension amounts under two possible assumptions: (i) the ‘triple lock’ (indexation in line with the largest of CPI inflation, average earnings growth and 2.5%) will

be maintained and (ii) the single-tier amount will be indexed with the average earnings growth from 2018 onwards.³⁰

Figure 5.4 shows that for any woman retiring before 2010, the BSP amount possibly accrued in the last year prior to reaching the SPA is higher than that of men. This is caused by different lengths of their working life and thus a different number of years required in order to receive the full BSP amount. This does not, however, mean that women will receive more state pension than men. The full BSP amount is the same for both men and women, and men have a longer working life for the whole period (thus more years in which they can contribute).

Figure 5.4. Total pension accrual for self-employed individuals by the year prior to reaching the SPA (in real terms, 2018 prices)



Note: The amounts accrued relate to the amount of pension income in the first year of receipt of state pension income. This assumes that qualifying conditions are fulfilled by the self-employed man/woman and that the individual has not already accrued rights to a full pension in the year before they retire. Inflation is adjusted for using the CPI.

Source: Authors' calculations. Forecasts regarding average earnings growth, CPI inflation and the triple-lock effect are taken from Office for Budget Responsibility (2018a, b).

Starting with 2010, we see no difference between the value of the last qualifying BSP/single-tier year for men and women, as there are 30 years needed for both men and women to receive the full BSP.

³⁰ The projections for earnings growth were made prior to the COVID-19 pandemic and associated recession.

Although, since 2010, there is no difference between the values of the last flat-rate component qualifying years for men and women, in the period 2002–15 we expect many more women obtain entitlement to the S2P, because they are more likely to receive Child Benefit.³¹ As shown in Figure 5.4, the combined BSP and S2P amount tends to be higher than the single-tier amount.

After 2018, we project the evolution of the new state pension for the self-employed, using both the triple lock and average earnings indexation. Over the longer-run, triple lock indexation becomes increasingly more generous than earnings indexation.

Between 1960 and 1980, we see a twofold increase in the value of an additional qualifying year (pre-1975 indexation was ad hoc, while over the period 1976–80 indexation was to the higher of average earnings and CPI inflation). The BSP had almost a flat value for the next two decades (a slight increase due to uprating with RPI inflation, which is typically higher than inflation as measured by the CPI). Because earnings grew faster than inflation over this period, the value of the state pension relative to average earnings decreased substantially over those two decades (see Figure A3). The rise in the period 2003–09 is caused by the government's promise of increasing the BSP with the higher of 2.5% and inflation. In 2010, the government not only changed the legislation regarding the minimum number of years needed to receive the full BSP amount, but also introduced the triple lock, causing another increase in generosity.

Figure 5.4 presents the amount accrued in a year assuming the maximum entitlement had not been reached. We now turn finally to look at the maximum entitlement that could be accrued. Figure 5.5 presents the full basic/new state pension amount over time (in 2018 prices). This is the amount that would be awarded to self-employed individuals with sufficient NICs for the full amount and who did not accrue any entitlement to S2P.

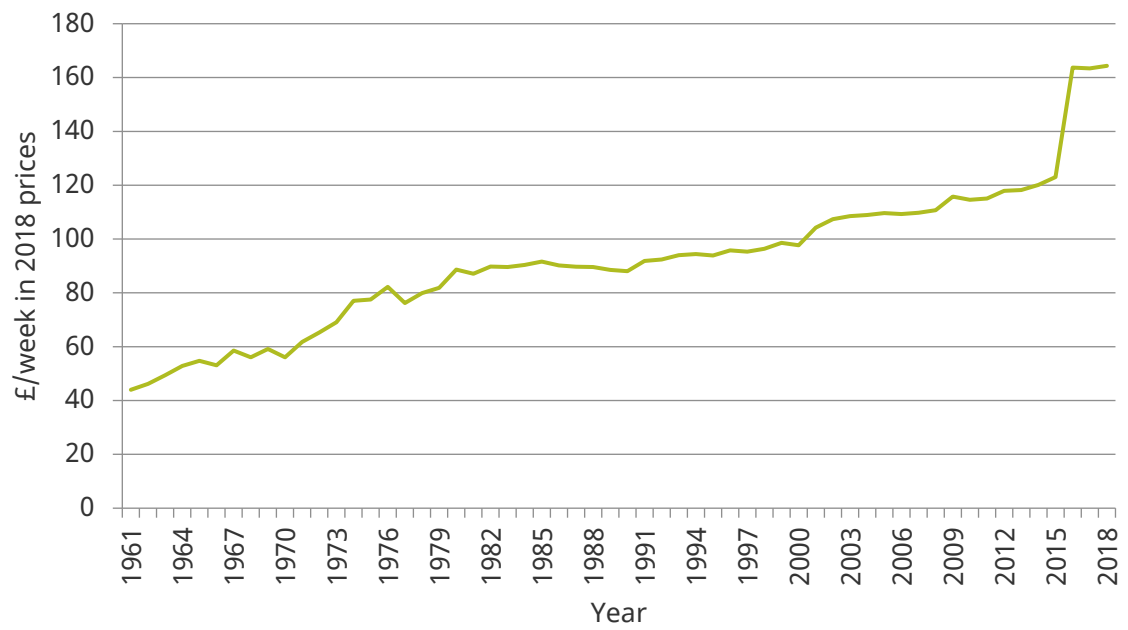
Compared with Figure 5.4, this graph does not show any difference between men and women as, if they fulfil their (different until 2010) qualifying years requirement and have no entitlement to S2P, then they will receive the same state pension each year. At the same time, there is no jump in the value in 2010, as the full amount is not dependent on the number of years required to receive it.

In the rest of the period, the figure is quite similar to Figure 5.4. Before the introduction of the new state pension, we saw an increase in value prior to 1980 when the indexation was either ad hoc or the higher of RPI inflation and average earnings growth, a very slow increase in the 1980s caused by the small difference between RPI inflation (to which the BSP was indexed) and CPI inflation (which we use to compare prices over time) and a more significant increase after the reintroduction of more generous rules for indexation starting in 2003.

Similar to Figure 5.4, the introduction of the new state pension has meant that the state pension system is more generous to the self-employed who fulfil the criteria for the full amount, with an increase in state pension income at retirement of over £40/week.

³¹ However, entitlement based on Child Benefit can be changed post-factum between partners, but we have no data on how prevalent this is.

Figure 5.5. Full basic/new state pension amount over time (1961–2018) in 2018 prices



Note: Inflation is adjusted for using the CPI.

6. Conclusion

Those working for their own business are a small, but rapidly growing proportion of the UK workforce. In 2016, there were just under 4.8 million people working for their own business, accounting for approximately 15% of the UK workforce, the highest proportion to be recorded since at least 1854. This recent rise is explained by both a higher number of self-employed individuals and company owner-managers. In this report, we have analysed the interaction between the recent rise in self-employment and the coverage and generosity of the UK state pension system.

By looking at workers' earnings and the most important pension creditable activities, we found that the self-employed (as opposed to employees or employee owner-manages) are consistently the group of workers who are the least likely to accrue qualifying years towards the state pension. In 2016, 650,000 (19%) of those whose only form of paid work is self-employment did not accrue a qualifying year of state pension. This compares with 5% of people whose only paid work is as an employee. Also, 14% of those whose only work is as an owner-manager did not accrue a qualifying year of state pension.

The reasons behind these differences are clear. The self-employed are the most likely group of workers to work part-time, and to leave formal education before or at the end of compulsory education. As a consequence, they have the lowest earnings. Owner-managers are the most likely group to leave education at age 19 or older, to work full-time and have the highest median earnings. However, their earnings are much more widely distributed than those of other employees, meaning that a higher proportion of owner-managers have very low labour incomes. This explains why the self-employed are the least likely group to qualify via earnings, followed by the owner-managers and the employees.

Our analysis has also shown that the proportion and number of those not accruing a qualifying year has increased over time. Compared with 2007, approximately 350,000 more workers are not accruing a qualifying year in 2016, meaning that the total proportion of those not qualifying increased from 6.2% to 7.1% of workers.

In Chapter 3, we decomposed this 0.9 ppt increase in the proportion of workers not accruing entitlement to the state pension in a given year between 2007 and 2017. This revealed that approximately one-third of this increase was due to legislation changes that meant fewer Child Benefit recipients could receive accrual, roughly one-third by changes in labour market composition that meant that self-employment was more prevalent, and the remaining roughly one-third by changes in the proportion of different groups of workers accruing qualification. Most noticeably, we observe that the effects of the financial crisis and the post-financial crisis stagnant wages for the low-earners are affecting the proportion of employees and self-employed accruing a qualifying year.

We have also looked at the amount of state pension that could be accrued. For the lifetime self-employed men and women, the single-tier pension is more generous in terms of the full possible amount that they can accrue than under any previous system. A higher number of years is, however, required to accrue the full amount than was the case under the system that was in place between 2010 and 2015 (35 years, compared with 30 years). In addition, a small number will lose from the reintroduction in 2016 of a minimum number of 10 qualifying years in order to receive any state pension.

For both a self-employed woman and man reaching the SPA in 2018 and not in receipt of Child Benefit or WTC, the new single-tier state pension is more generous in terms of per (typical) year accrual than any previous system. The only significant other gain for the self-employed (and employees) in terms of per year accrual occurred in 2010, when the number of years required to receive the full BSP amount decreased from 90% of working life to 30 years.

The picture is slightly different for someone reaching the SPA in 2045. Single-tier pension accrual is less than accrual of BSP and S2P under the system in place between 2010 and 2015 and slightly less than the system in place prior to 2010. Under these systems, S2P accrual for the self-employed was possible for those receiving WTC and some of those receiving Child Benefit. However, over the whole of their lifetime, we do not expect (due to the nature of these S2P accruing conditions) the BSP and S2P entitlement to exceed the single-tier entitlement for a typical self-employed person.

Of course, many of the self-employed will not be in self-employment for the whole of their working life. Using longitudinal data to understand the interactions between employment and self-employment, and therefore the generosity of different state pension systems for individuals who move in and out of self-employment, is an important direction for future work. Furthermore, analysis of such data would be able to shed important light on the earnings profiles of the self-employed – in particular, the persistency of low earnings. This is important for understanding their state pension provision (whether those not accruing a qualifying year in any given year might have a lower state pension income in retirement as a result) and the implications of that for the adequacy of their retirement provision.

Appendix

Table A1. The proportion and absolute numbers of Class 1, Class 2 and Class 1 and 2 contributors who accrue a qualifying year towards the single-tier pension in 2007

<i>Working status</i>	<i>Qualification status</i>	<i>Percentage</i>	<i>Number</i>
Employees and owner-managers (potentially making Class 1 contributions)	Do not qualify	4.6	1,100,000
	Qualify via earnings	93.2	22,240,000
	Qualify via CB, not earnings	2.2	530,000
	Total	100.0	23,870,000
Self-employed (only) (potentially making Class 2 contributions)	Do not qualify	19.1	570,000
	Qualify via earnings	74.7	2,230,000
	Qualify via CB/WTC, not earnings	6.2	190,000
	Total	100.0	2,990,000
Employees/owner managers and self-employed (potentially making both Class 1 and 2 contributions)	Do not qualify	4.0	10,000
	Qualify via earnings	93.0	310,000
	Qualify via CB/WTC, not earnings	3.0	10,000
	Total	100.0	330,000
Total working-age workforce (Great Britain, 2016)	Do not qualify	6.2	1,690,000
	Qualify via earnings	91.1	24,780,000
	Qualify via CB/WTC, not earnings	2.7	720,000
	Qualify total	93.6	25,460,000
Total employed, 2016		100.0	27,200,000

Note: Those that have both an eligible income and Child Benefit (CB) are included in the 'Qualify via earnings' category. The CB qualification is awarded if the person is receiving CB and has a child younger than 12.

Source: Authors' calculations using FRS 2016.

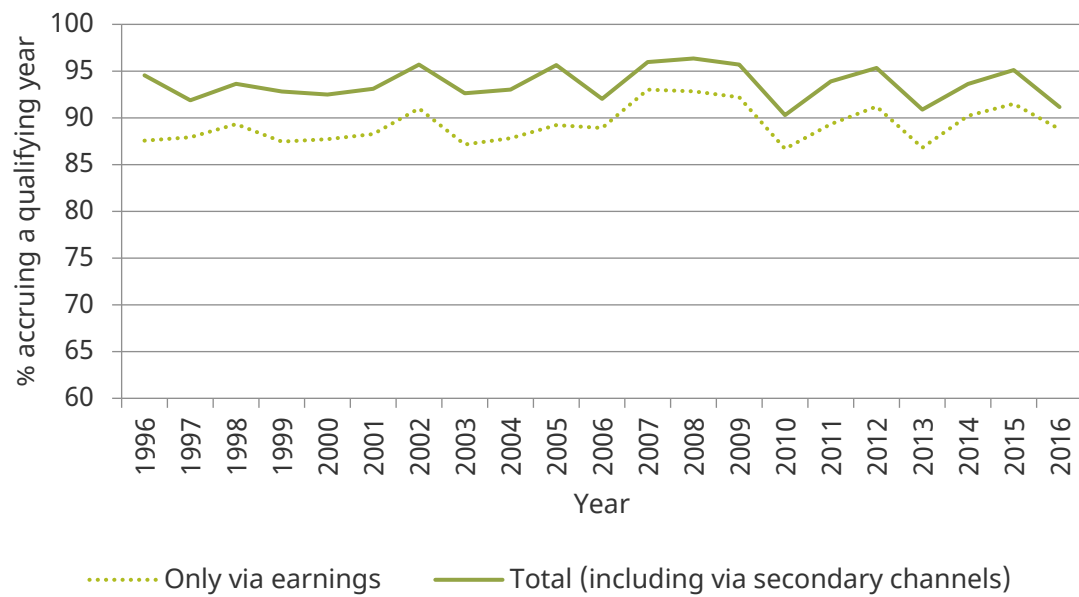
Table A2. The proportion and absolute numbers of Class 1, Class 2 and Class 1 and 2 contributors who accrue a qualifying year towards the single-tier pension in 2000

<i>Working status</i>	<i>Qualification status</i>	<i>Percentage</i>	<i>Number</i>
Employees and owner-managers (potentially making Class 1 contributions)	Do not qualify	5.1	1,160,000
	Qualify via earnings	92.0	20,970,000
	Qualify via CB, not earnings	2.9	660,000
	Total	100.0	22,780,000
Self-employed (only) (potentially making Class 2 contributions)	Do not qualify	19.9	540,000
	Qualify via earnings	73.9	1,990,000
	Qualify via CB/WTC, not earnings	6.1	170,000
	Total	100.0	2,690,000
Employees/owner managers and self-employed (potentially making both Class 1 and 2 contributions)	Do not qualify	7.5	20,000
	Qualify via earnings	87.7	280,000
	Qualify via CB/WTC, not earnings	4.8	20,000
	Total	100.0	320,000
Total working-age workforce (Great Britain, 2016)	Do not qualify	6.7	1,720,000
	Qualify via earnings	90.1	23,240,000
	Qualify via CB/WTC, not earnings	3.3	840,000
	Qualify total	93.3	24,080,000
Total employed 2016		100.0	25,800,000

Note: Those that have both an eligible income and Child Benefit (CB) are included in the 'Qualify via earnings' category. The CB qualification is awarded if the person is receiving CB and has a child younger than 12.

Source: Authors' calculations using FRS 2016.

Figure A1. Evolution of the proportion of both Class 1 and Class 2 contributors accruing a qualifying year



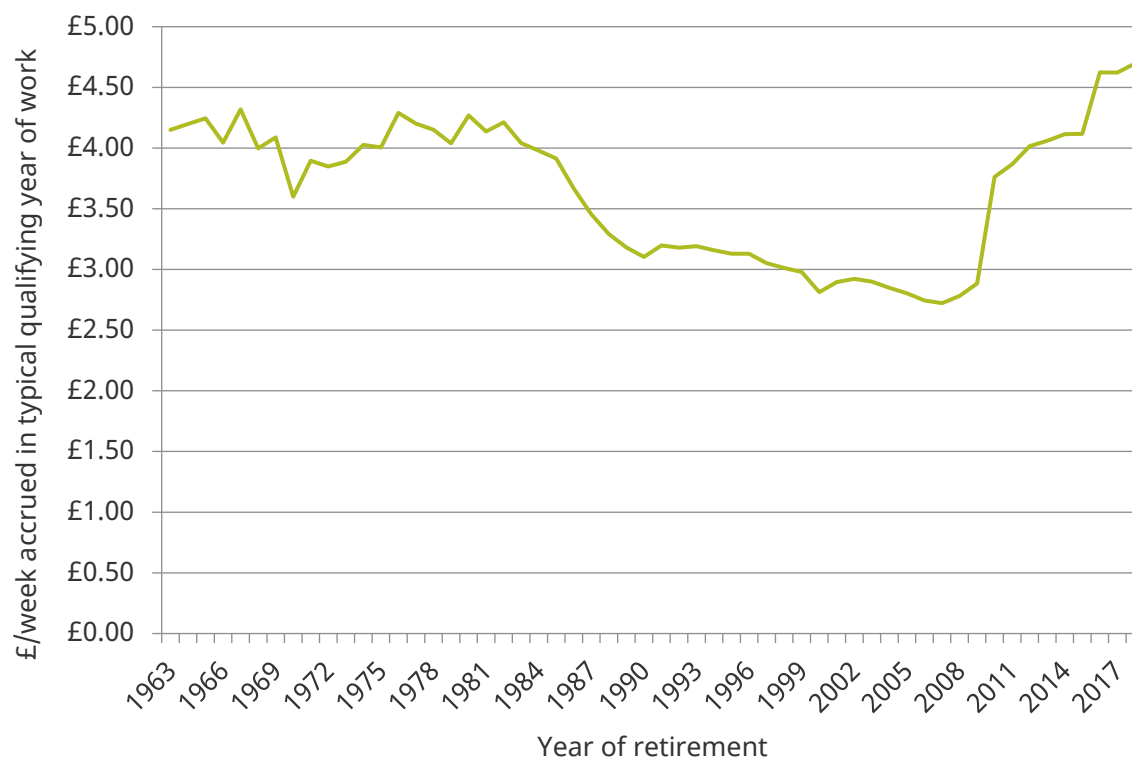
Source: Authors' calculations using the FRS 1996–2016.

Figure A2. Evolution of the proportion of company owner-managers accruing a qualifying year



Source: Authors' calculations using the FRS 1996–2016.

Figure A3. Total value of pension possibly accrued for the first year of retirement in the last year of work if qualifying conditions fulfilled by a self-employed woman (in real terms, 2018 earnings-indexed)



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