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BRIEFING

Feel poor, work more

Explaining the UK's record employment

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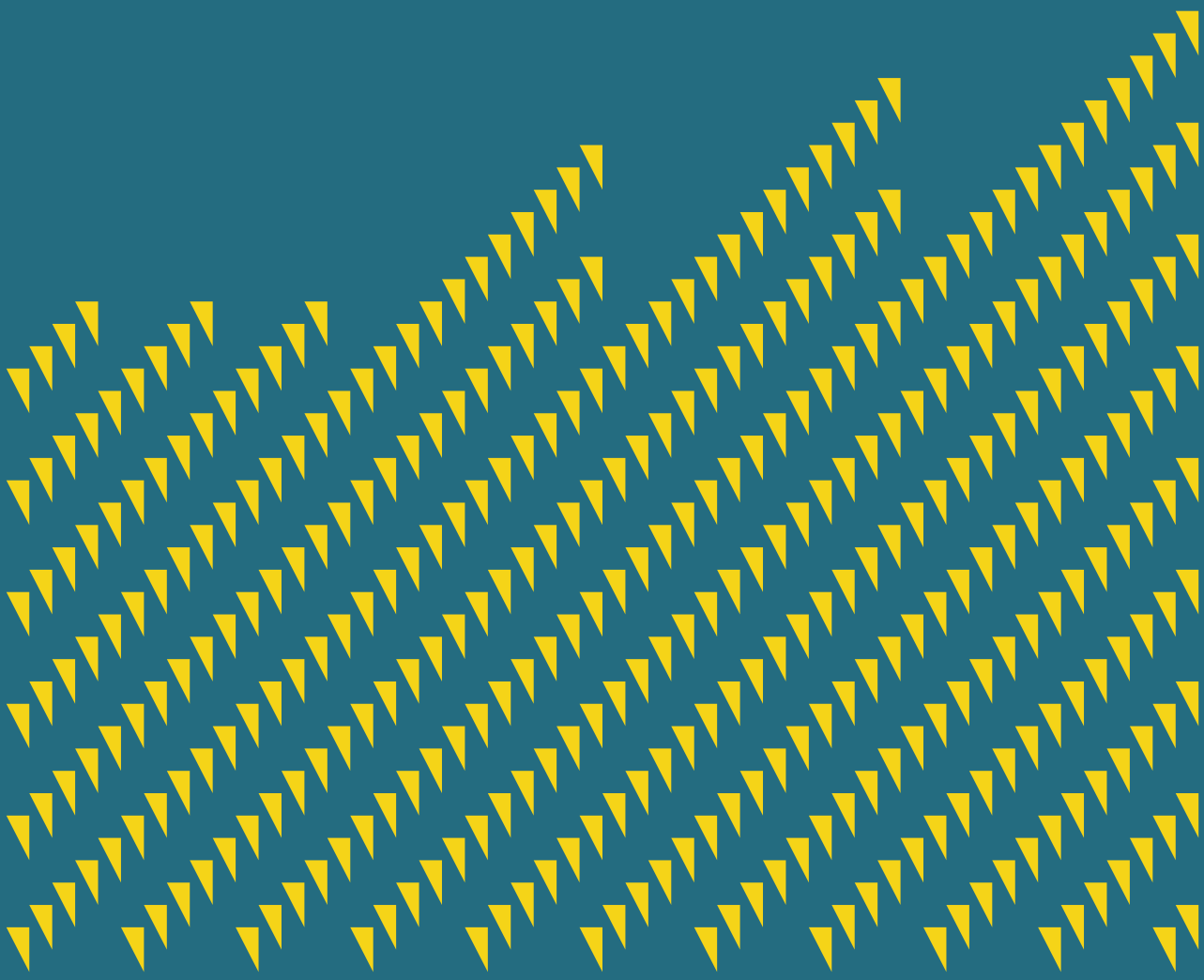

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Summary

We all aspire to understand, rather than simply inhabit, 21st century Britain. So when big changes happen to our country the goal is to explain them rather than merely to describe them. But often we do not achieve this goal – we know what has happened, but not why.

As we head into the fourth election since the financial crisis of just over a decade ago, it's clear that there is no bigger change to our economy over this period than the employment boom. Over 3 million more people are in work and the working-age employment rate is around 3 percentage points higher than when we were last broadly at full employment in 2008. These are levels no-one thought possible a decade ago and that have flown in the face of demographic headwinds. Why are so many of us working? Because we're a lot poorer than we expected to be. That's the fundamental argument of this paper.

Some have argued that the actions of policy makers (microeconomic causes) or the preferences of firms (labour demand pulls) are the key drivers of the employment boom. But neither offers a satisfactory explanation of developments over the past decade.

The timing of the policy actions referred to (securing a flexible labour market and introducing Universal Credit) means they cannot lie behind record employment levels. Flexibility has *enabled* swift employment growth, and the rise in insecure employment forms such as zero-hours contracts within this. But it cannot explain why more people are working today than before the crisis for the simple reason that the labour market is not significantly more flexible today than it was in 2008. Meanwhile, Universal Credit's roll-out has been so slow that it only accounted for 10 per cent of its final caseload and 2 per cent of the working-age population as late as 2018 – five years into the employment boom.

Labour demand explanations have much more to offer. But if considered alone, are not consistent with the major stylised facts of our labour market. Firms are likely to have responded to labour becoming cheaper relative to capital (given big post-crisis falls in real wages), and to heightened uncertainty about the future, by choosing to employ less capital and more labour. But if increased labour demand was the main driver of rising employment, the mechanism by which it would bring more workers into the labour market is upward pressure on wages. The opposite has happened – the unprecedented absence of wage pressure has been the other defining feature of our post-crisis economy, alongside the jobs surge. With real wages still £2 per week lower than their pre-crisis peak, we need to look elsewhere for a full explanation of the changes we have witnessed.

An increase in labour supply by households (that is, more people wanting to work, or wanting to work longer for a given wage) rather than labour demand by firms is a better

theoretical fit with these twin stylised facts of high employment and subdued pay. Why might this have happened? Because a deep recession in which wages fell dramatically, followed by an unprecedentedly sluggish earnings recovery, meant household incomes dropped far further than expected, and stayed lower. A median earner is today earning a full one-fifth less than would have been the case had pre-crisis real earnings trends continued. A rational response from households has been to shield family finances from the depth of such earnings reductions by increasing the number of workers or working more hours.

This theoretical argument for increased labour supply playing the dominant role is supported empirically by the UK data. We offer three key pieces of evidence.

First, the decades-long decline in working hours has stalled since 2008, with working hours almost one hour per week higher than they would have been if the post-1980s trend had continued. And despite the stalling of working hours reductions, one-in-ten workers still wants more hours today – a figure that is higher than on the eve of the crisis.

Second, the employment of women – particularly those in couples (the most obvious candidates for increased labour supply in response to a shock to main earners' wages) – was flat before the crisis but has accelerated rapidly since. For example, the employment rate of coupled mothers has increased by over 5 percentage points over the past decade, and their average working week has increased by over 2 hours. This outcome has been driven both by the 'push' factor of weak main earners' earnings, and the 'pull' factor of relative earnings improvements for lower earners due to the rising minimum wage.

Third, rising employment has been a common feature across advanced economies in the aftermath of the financial crisis – reflecting the common income shock it led to.

Overall, we are working an extra 65 million hours each week than if we still had the 2008 employment rate today and the long-run decline in working hours had continued. A little over half of this (37 million hours) is the result of more people working, with the rest down to many of us working a little bit more than we might otherwise have.

Employment has increased particularly rapidly for women in their early 60s (who have driven almost one-third of the overall 16-64 year old employment rate increase), and for those in the lowest income deciles, especially single parents. This is evidence that a rising State Pension age and welfare cuts have contributed to the labour supply shift. This has doubled down on the effects of the wage squeeze for working households, and provided a non-wage-related income shock for workless ones. The fact that the biggest employment increases have occurred in households with children and among those on lower incomes is consistent with these groups being the least able to make adjustments elsewhere, for example by cutting back on non-essential spending.

There are profound policy-relevant lessons that follow from the recognition that increased labour supply in the face of an income shock is a central feature of why our economy has behaved the way it has over the past extraordinary decade.

First, this does not mean people working more is a bad thing. Just because something has an unwelcome cause does not mean it should not be welcomed. Households being able to increase their labour supply has been a key mechanism for protecting incomes in difficult times, and it has contributed to narrowing employment gaps between groups and places. Our flexible labour market has made that possible – but also left us with a legacy of too much insecure work. We should welcome the former and address the latter.

Second, this employment increase may well not simply reverse, and policy should be targeted to ensure that it does not. It is not yet clear if we can maintain our recent stronger pay growth – a necessary condition for households being able to 'spend' some of the increase on working less. But higher labour supply may well also gain a degree of path dependence and push up equilibrium participation rates. Among some groups and places, ensuring it does should be an explicit goal of policy, given the wider societal benefits of high labour market participation. But restarting the long-term decline in average hours worked would also be desirable, so long as this is accompanied by strong earnings growth and the human desire to do more than just work.

Third, we offer a clear explanation for one of the central macroeconomic puzzles of our time. Many people have retrospectively argued that the paradox of a lack of wage growth in the UK and elsewhere, despite low unemployment rates, either proves that the relationship between the two has broken down or reflects the fact that more slack exists in our labour markets than traditional measures imply. Our argument supports the idea that more slack has existed over the past decade, but goes further in explaining why that has been the case. At an individual level, increased labour supply helped protect incomes. But collectively it pushed up equilibrium employment, delaying the point at which the recovery delivered a tight labour market in which the virtuous cycle of wage pressure, and the productivity growth required to make it sustainable, could build. Had economists and policy makers, including those in the Bank of England, recognised this fact they would have spent less time questioning whether the Phillips Curve still exists and more time focusing on reaching the new higher employment rates needed to secure decent earnings growth.

This is of course much easier to say in hindsight. The lesson for today is that having waited so long to reach full employment, we in the UK should now do everything possible to maintain it. For other countries, including the US, this argument helps explain why a return to robust wage growth has not yet materialised. And the lesson for the future is that policy should be set with an eye not just to what equilibrium employment was before a crisis, but what any income shock may have done to that equilibrium over its course.

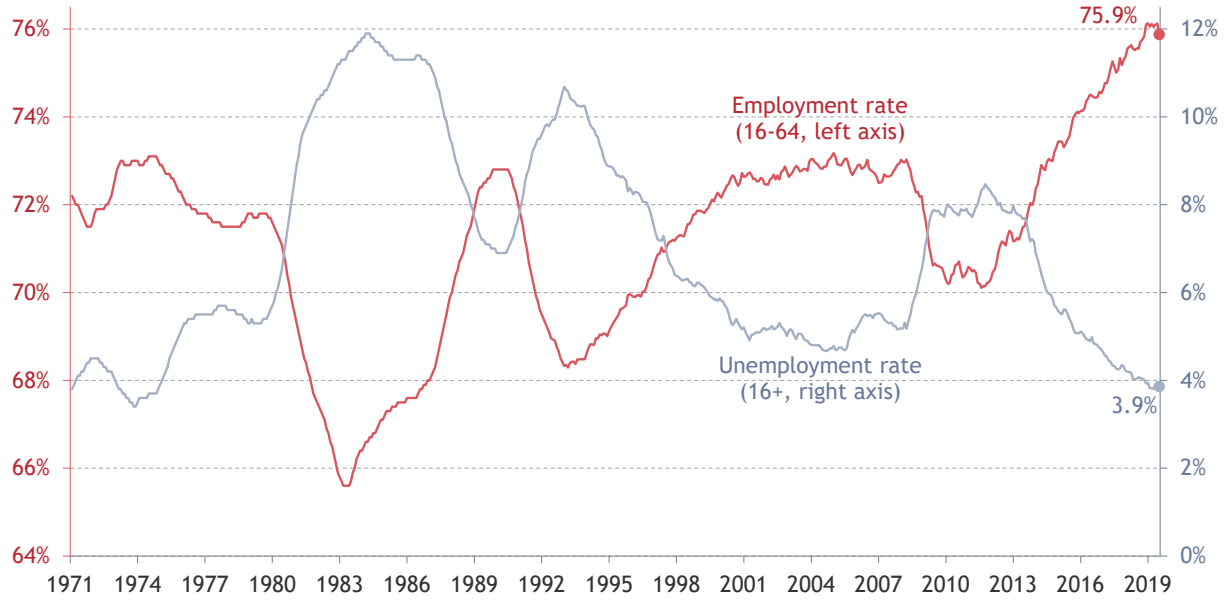
More generally, as policy makers wait to find out who is steering them through the coming years in the role of prime minister or governor, they should recognise that a full understanding of the causes of our record employment today makes us more cautious about assuming that big features of our economy remain unaltered in the face of changes on the scale of the financial crisis. In many ways our economy is made up of the aggregation of human preferences, and the one thing we all know is that humans can change their mind.

Britain's employment boom has defied both forecasters and headwinds – understanding why that has happened is essential

There is no bigger change to our economy over the past decade than its employment boom. Before the financial crisis, 73 per cent of the working-age[1] population was working – and we broadly thought that is what full employment looked like. Today that figure is 75.9 per cent, having been 76.1 per cent throughout most of the first half of 2019. That is the highest employment rate ever on a comparable measure, as Figure 1 shows. In reality it is the highest since the Second World War, when men were busy fighting and women keeping the country's productive capacity intact.

FIGURE 1: **The working-age employment rate has been at or close to a record high throughout 2019**

Employment and unemployment rates: UK



SOURCE: RF analysis of ONS, *Labour Market Statistics*

1 Like the Office for National Statistics does, we define 'working age' as 16-64 year olds throughout. This measure does not account for changes in the State Pension age, an issue we discuss below.

Previous Resolution Foundation research describing the make-up of record-high employment showed that the increase has been more dramatic still for some groups. The lowest qualified, black, Asian and minority ethnic (BAME) groups, people with disabilities, and the least jobs rich sub-regions of the country (Merseyside, the West Midlands metro area and South Yorkshire) have all experienced growth during 2008-18 around twice as fast as the average. Single parent employment has accelerated four times faster than average.[2]

Record employment levels are not mainly a story about migration. The fact that people born outside the UK have grown as a share of the population over this period means that they account for nearly two-thirds of the employment increase in raw numbers terms. But this growth has come from both migrants with above-average employment rates (like those born in A8 accession countries) and those with below-average ones (like those born outside the EU), meaning that overall the 'compositional' effect of changing migrant numbers within the population on the employment rate is small.[3] At the same time, the UK-born 16-64 year old employment rate has increased from 73.5 per cent to 76.3 per cent – a similar scale of increase to the headline employment rate.[4] Put simply, the employment boom has been felt to similar extents by both migrants and non-migrants.

This is a boom that few saw coming, and which continued long after many of us thought it was about to peter out. While Office for Budget Responsibility (OBR) forecasts for output and wages have been continually downgraded, employment has repeatedly surprised on the upside, as Figure 2 shows (with reference to the *number* of people in work).[5]

2 S Clarke & N Cominetti, Setting the record straight: How record employment has changed the UK, Resolution Foundation, January 2019

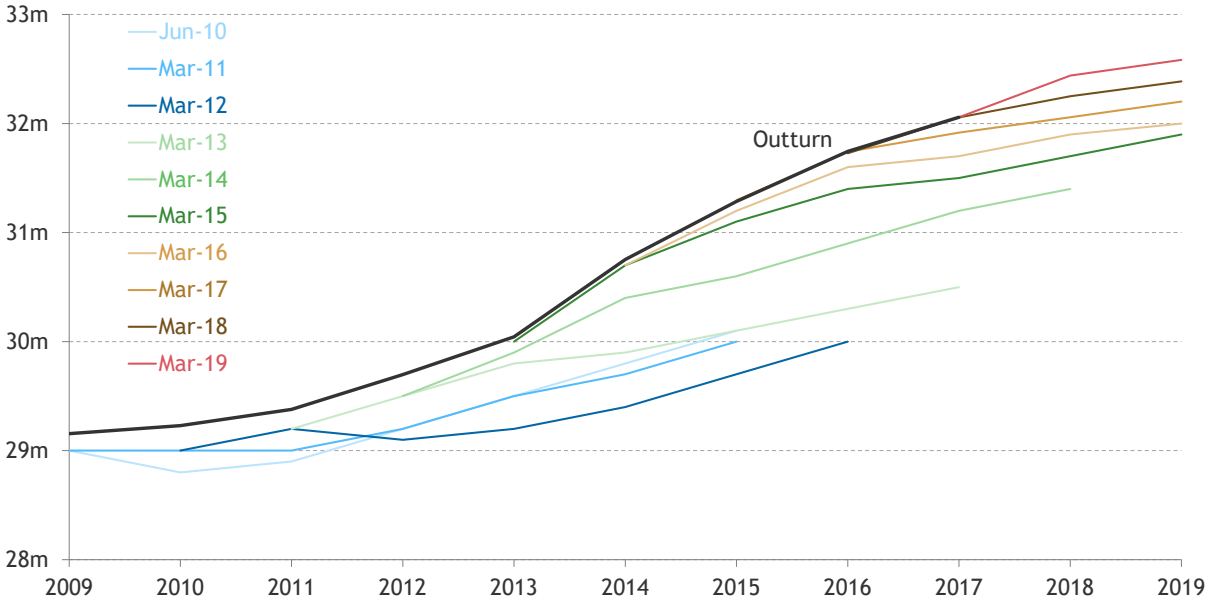
3 See Figure 7 and Table 4 in: S Clarke & N Cominetti, Setting the record straight: How record employment has changed the UK, Resolution Foundation, January 2019

4 Of course, the analysis discussed here says nothing about the interaction between compositional shifts in the population by country of birth, and employment rates for those born in the UK. For a discussion of these kinds of effects. See: S Clarke, A Brave New World: how reduced migration could affect earnings, employment and the labour market, Resolution Foundation, August 2016

5 Forecasts for the 16-64 year old employment rate are not published, but forecasts for the 16+ employment rate are. In their December 2013 Economic and Fiscal Outlook, the OBR projected that employment would total 31.2 million people in 2018, with a 16+ employment rate of 59.8 per cent. The outturn figures for 2018 were 32.4 million people in employment, and a 16+ employment rate of 61.2 per cent. Source: OBR, Economic and Fiscal Outlooks (various)

FIGURE 2: **Employment has repeatedly surprised on the upside**

Forecasts of the number of 16+ year olds in employment at successive fiscal events: UK



SOURCE: OBR, *Economic and Fiscal Outlooks* (various)

And this puzzle is all the more perplexing because, all else equal, we might have expected employment to actually have gone down rather than up. That's partly because of the weakness of our overall economic growth over the past decade. Figure 3 shows that since the early 1970s, employment growth has tracked growth in output (with a lag) fairly closely, but at a rate around 2 percentage points lower. That gap between the growth rates has all but disappeared over the past decade (falling to 0.3 percentage points). If it had been maintained (even allowing for a looser relationship during the late-2000s recession itself, akin to that seen during the 1970s and 1980s), both the employment rate and the number of people in work would have fallen over the past decade, not risen.[6]

Looking beyond output itself, a more fundamental headwind to employment growth over the past decade has come from Britain's shifting demographic profile. More of us are old and more of us are disabled than was the case back in 2008,[7] both of which are associated with a lower likelihood of being in work. Focusing just on age, we can demonstrate this by estimating today's employment rate if within-age-group employment rates for men and women had remained fixed at their pre-crisis levels,[8] and the only thing that had altered over the past decade was the population's age profile. The working-age employment rate would have fallen slightly from 73.0 per cent to 72.9 per cent (growth in

6 A simplistic approach – leaving employment growth as it was during 2008-10 and applying the historic 2 percentage point gap from GDP growth from 2011 onwards – suggests about 1 million fewer people would have been in work in early 2019 than in mid-2008. This compares to an actual increase in employment of 3 million.

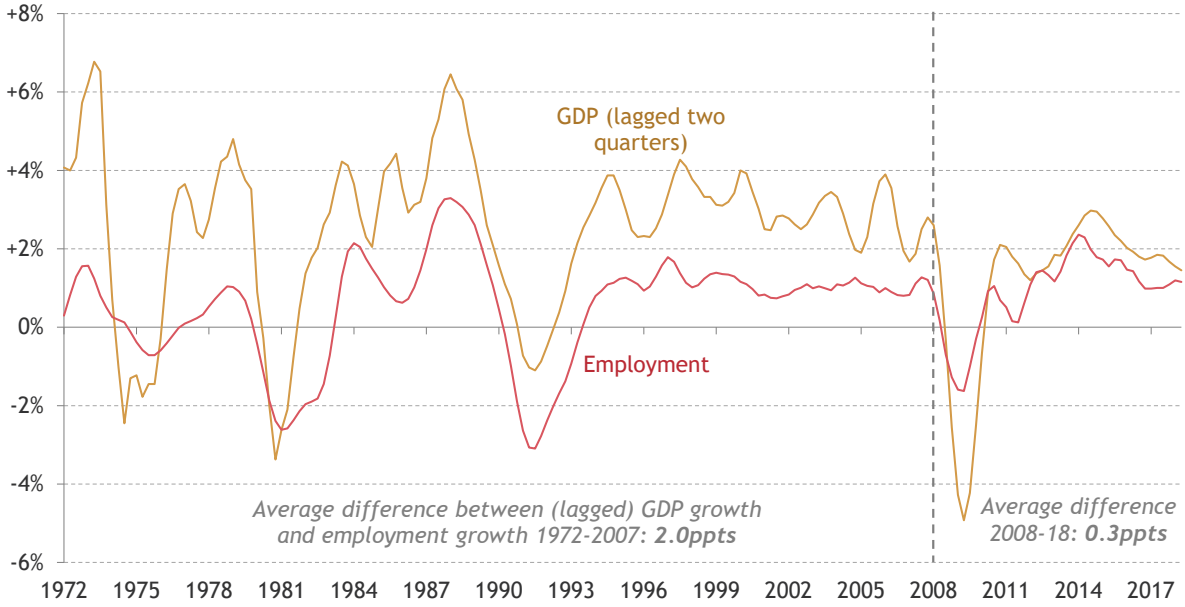
7 28 per cent of 16-64 year olds were aged 50-64 in early 2008, a figure that has risen to 31 per cent by mid-2019. Changes to the measurement of disability status means we cannot provide a precise estimate of the changing incidence of disability over the past decade as a whole. Focusing on the period from 2013 onwards when a consistent definition is available, the proportion of 16-64 year olds reporting as Equality Act Disabled has risen from 16 per cent to 19 per cent. Source: ONS, Labour Market Statistics

8 The age groups we capture are 16-17, 18-24, 25-34, 35-49, 50-64 and 65+.

the 50-64 year old population share being somewhat offset by a shrinking of the similarly low-employment 16-24 year old population share). More strikingly, the 16+ employment rate would have fallen from 60.4 per cent to 58.2 per cent. In actual fact it has risen to 61.3 per cent. This is a reflection of particularly rapid increases in the chances of being in work when of pension age (i.e. gains not even captured by our standard focus on the 16-64 year old employment rate).[9]

FIGURE 3: **The relationship between output and employment growth has shifted over the past decade**

Annual growth in GDP and employment: UK



NOTES: Both series are smoothed using four-quarter rolling averages. GDP growth is in real terms; employment measures the number of people aged 16+ in work. The GDP growth series is lagged by two quarters to reflect its strongest correlation with the employment growth series.
SOURCE: ONS, *Labour Market Statistics*; ONS, *National Accounts*

Of course, you might argue that holding employment rates fixed at pre-crisis levels is a straw man. The upward march of employment at older ages mentioned above has been a continuation of pre-crisis trends as we all live (and live healthier) for longer. Other groups also appeared to be on a fairly fixed long-term path pre-crisis, with prime-age women in particular experiencing steady participation increases (the 35-49 year old female employment rate increased from 74.5 per cent in 1999 to 76.9 per cent in 2005).[10] But even these increases for prime-aged women ground to a halt from 2005 onwards, and Figure 1 makes clear that any upward trends for particular groups stopped having an impact

9 The employment rate for men aged 65+ increased from 10.5 per cent in January-March 2008 to 13.9 per cent in June-August 2019. For women it increased from 4.6 per cent to 8.6 per cent.
10 While notable, this rate of increase was slower than during the 1980s and 1990s. For a discussion of the (slowing but continuing) secular trend of rising female labour force participation in the UK, see: G Razzu, C Singleton & M Mitchell, On why gender employment equality in Britain has stalled since the early 1990s, MPRA Paper No. 87190, June 2018

on the overall 16-64 employment rate earlier than this (it was flat in the five years from 2003).[11] And of course, the proposition that secular pre-crisis employment trends might have been expected to continue post-crisis ignores the headwind that much slower GDP growth (discussed above) has represented.

The other fairly fixed pre-crisis trend was a steady decline in the average hours that each person in employment works. As discussed in more detail around Figure 7, below, not only has the number of people in work grown more than we might have expected, but average hours have not continued falling as we would have expected them to. We are each working nearly one hour per week more than we might have been had the post-1980s trend continued.

This gives us a sense of the scale of the phenomenon of more work being done today that we are trying to explain. Limiting our focus to under-65s, every worker today shaving 0.9 hours off their working time as a result of this hours decline continuing would mean 28 million fewer hours being worked each week. And if we still had the 16-64 employment rate of 2008, there would be over a million fewer working-age people in work, equating to 37 million fewer hours of work being done per week.[12] So to provide some sense of scale we might say that there are 65 million more hours being worked each week as a result of the employment boom – a little over half (56 per cent) coming from more people working and the rest coming from many of us working a bit more.

So the question is this: if our economy was at full employment before queues started to form outside Northern Rock and is broadly at full employment today, why are so many more of us working or working more?

Providing an answer to that question is the task of this paper. We begin by exploring some common theories, before offering what we view to be a particularly compelling but relatively under-explored one: that record employment owes much to a labour supply response of households to the shock of being poorer than they expected to be. While this is of course not the whole story, it is the central cause. We present theoretical and empirical evidence in favour of this too-often-ignored explanation, and reflect on its implications for policy makers' understanding of the past decade and the choices we face today.

11 This was the result of some further increases for groups like 35-49 year old women being offset by declining employment for other groups (notably those aged under 25).
12 To avoid double counting, this 37 million hours figure calculated based on our 'counterfactual' hours estimate, i.e. the estimated number of working hours per week had the post-1980s hours decline continued over the past decade.

Some point to welfare reform and labour market flexibility, but these microeconomic explanations are deeply unsatisfactory

While far too little time has been devoted to the question of how we've got to record employment, some possible explanations that point to the actions of policy makers have been offered. We explore the two of these microeconomic explanations that are most common. First, some argue the employment boom is the result of social security reform, principally the introduction of Universal Credit (UC) providing better incentives for people to enter work. Second, others have pointed to our flexible labour market as the key driver.

"We know that [Universal Credit] is working and getting people into work because our employment figures that came out yesterday show that over 3.3 million more people are in work since 2010." So said the then Secretary of State for Work and Pensions, Esther McVey, in parliament last year.[13] But the argument that Universal Credit has radically changed work incentives and driven employment increases is both true and ridiculous. It is true that UC makes the process of moving into work from unemployment easier and less risky – not least because it reduces the fear that you will have to reapply for benefits if you subsequently fall back out of work. Indeed, there is some (limited) evidence that UC has supported higher employment.[14] But it cannot be the explanation for our employment boom for one simple reason: almost no-one was on UC when the boom took place.

The first UC claims were made in May 2013, as Figure 4 shows, when employment numbers had already surpassed their 2008 peak. In 2018, when most of the employment boom had materialised, only around 10 per cent of the full caseload were on UC, equating to only 2 per cent of the working-age population. Even today only 2.5 million people are on UC (around 800,000 of whom are in work) and it is less than one-third of its way towards full roll-out.

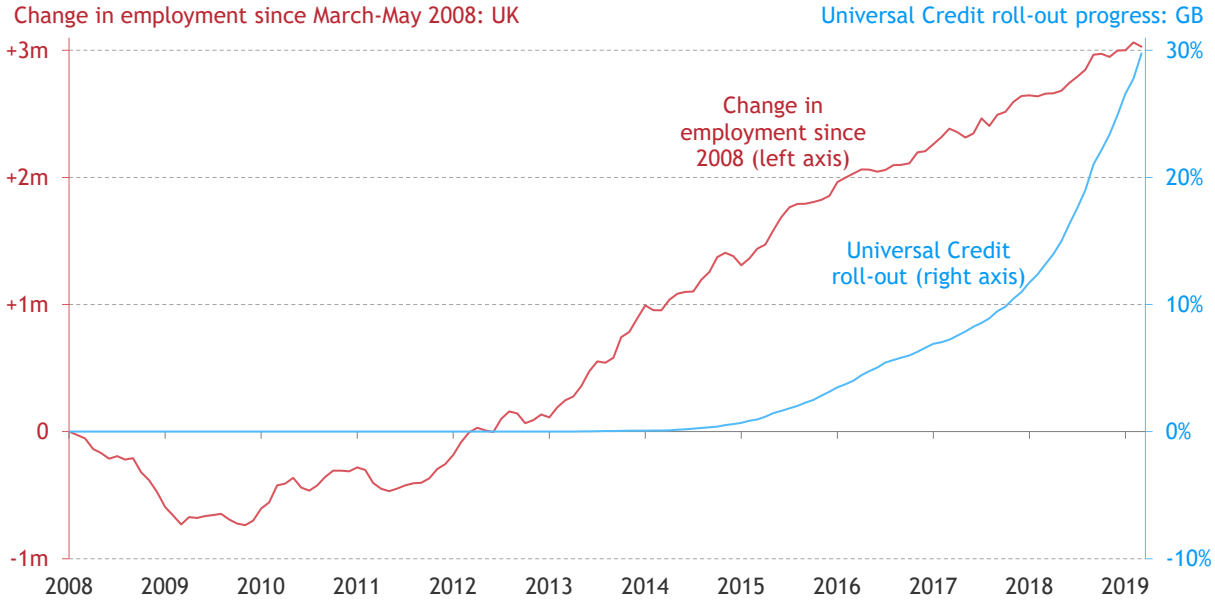
UC may be the answer to many questions, but it is not the answer to this one. Perhaps when ministers credit UC for the employment boom, they do not really mean UC itself but wider changes to welfare processes?[15] There may be something there: 'lone parent obligations' that increased conditionality for single parents by moving them from Income Support onto Jobseeker's Allowance (JSA) did boost employment entry.[16] And wider changes to UK active labour market policy appear to have pushed welfare use down, in

13 Hansard, 17 October 2018
14 Department for Work and Pensions, Estimating the early labour market impacts of Universal Credit: Updated analysis, December 2015
15 Ministers have sometimes confused the two, see: Full Fact, Universal Credit isn't the reason there are 1,000 more people a day in work, October 2018
16 S Avram, M Brewer & A Salvatori, Lone Parent Obligations: an impact assessment, Department for Work and Pensions, July 2013

stark contrast to the US.[17] But much of this policy targeting began in the 2000s, with the 2010s marking a continuation of activation measures, rather than a totally new direction. One exception is the significant intensification of the use of sanctions.[18] A staggering 820,000 JSA and Employment and Support Allowance claimants were sanctioned in 2012, and 920,000 in 2013. That compares to the 260,000 average during 2001-07.[19] But while the number of sanctions has since fallen back from this extreme level, the employment boom has continued.

FIGURE 4: **Employment growth pre-dates the introduction of Universal Credit**

Employment growth and Universal Credit roll-out progress: UK/GB



NOTES: Universal Credit roll-out progress is calculated by dividing the number of people on Universal Credit each month by an estimated steady-state caseload of 7.3 million people (based on Office for Budget Responsibility forecasts).
SOURCE: RF analysis of ONS, *Labour Market Statistics*; DWP, *Universal Credit statistics*; OBR, *Economic and Fiscal Outlook*, March 2019

That's not to say that post-2010 welfare changes have played no role at all in rising employment, they just haven't in the way often asserted. We will return to the role of welfare changes later.

A second assertion is that Britain's flexible labour market has been the driver of the employment boom. Without doubt, the flexibility of our labour market is an enabler of our higher employment levels – allowing the preferences of firms and workers to be acted on without major barriers. And flexibility may play some part (although not the

17 A Corlett & P Gregg, An Ocean Apart: the US-UK switch in employment and benefit receipt, Resolution Foundation, July 2015
18 A Tinson, The rise of sanctioning in Great Britain, New Policy Institute, June 2015
19 The 2001-07 figure applies to JSA claimants only, because prior to the introduction of Employment and Support Allowance in 2008, there was very little application of conditionality within the health-related benefit regime. Source: DWP, Benefit sanctions statistics

major part)[20] in explaining the smaller unemployment rise in the depth of the crisis than was witnessed in previous recessions. It certainly lies behind the fact that much of the immediate post-crisis jobs growth took the form of atypical work such as zero-hours contracts and self-employment. Indeed, the fact that atypical and insecure employment forms rose rapidly in the crisis and have not come down as the employment boom has gathered pace is a significant blackspot on the UK's recent employment record.[21]

But while labour market flexibility helps us understand the speed and nature of the employment recovery, it cannot explain its extent, nor the step change in labour market participation we have seen.[22] Employment today is much higher than in 2008, while the level of labour market flexibility is not materially different.[23] This is a fact even those who believe higher flexibility would lead to higher employment levels (doubtful given the UK's highly flexible starting point) will recognise.

Others have pointed to an increase in firms' demand for labour

A more substantive explanation for the UK's new higher employment equilibrium centres on an increase in demand for labour as firms respond to changes in relative prices, or to economic uncertainty, by preferring to hire people rather than invest in machines.

When deciding how to produce a given output, firms have choices about how they do so – including how many people to employ and what investment in capital to make. The sharp devaluation of Sterling in 2008 – which was then echoed in 2016 following the Brexit referendum – pushed up inflation. That facilitated big declines in real wages, which then pushed down the relative price of labour for firms.[24] To the extent that some investment goods (machines) are imported, devaluations simultaneously pushed up the prices of some capital. The result of such an outcome is that firms will choose to hire more workers rather than put money into new kit. Formally, capital-labour substitution means labour demand at any given wage level increases.

Uncertainty has also played a role. The choices that firms make are shaped not only by demand for their products today, but also the level of economic uncertainty that

20 The major driver was Sterling devaluation during the crisis pushing up inflation, which meant that firms could let real wages fall rather than shedding jobs. See: S Clarke & P Gregg, Counting the pennies: Explaining a decade of lost pay growth, Resolution Foundation, October 2018

21 For example, the proportion of people in employment on a zero-hours contract increased from 0.5 per cent in 2008 to 2.5 per cent in 2018, and the proportion who were self-employed rose from 13.0 per cent to 14.7 per cent. See: S Clarke & N Cominetti, Setting the record straight: How record employment has changed the UK, Resolution Foundation, January 2019

22 The 16-64 year old economic activity rate was 77.1 per cent in early 2008; today it is 79.0 per cent.

23 The only significant increase in flexibility (or insecurity for workers) has been the 2012 increase to two years in the period for which someone must have worked before they can claim unfair dismissal. For some individuals this change may have had a big impact, but it has not transformed our labour market.

24 For example, in 2008 the size of the devaluation was around 27 per cent. Alongside this, inflation rose sharply during the financial crisis because oil and commodity prices did not fall as much as would have been predicted given the size of the downturn. See: S Clarke & P Gregg, Counting the pennies: Explaining a decade of lost pay growth, Resolution Foundation, October 2018

surrounds that demand into the future. And a decision to hire labour is more easily and cheaply reversed than one to buy more capital, especially in the UK's flexible labour market.

Because hiring labour is more reversible, during times of greater economic uncertainty (caused by a huge financial crisis, or Brexit, for example), "it makes sense for businesses to meet that demand by expanding their workforce rather than by increasing investment spending," as Jan Vlieghe of the Bank of England has argued.[25] In practice this could take place at the firm level, or by more labour-intensive firms expanding more quickly during a time of economic uncertainty than capital-intensive firms.[26] And there is support for such an argument in the data: measures of economic uncertainty have been consistently elevated since the crisis,[27] while private-sector investment and labour productivity have remained painfully weak.

One piece of evidence in favour of this higher labour demand account is the groups that have benefited most from rising employment. The increase in employment has been particularly marked among groups for whom employment has traditionally been low, especially single parents, those with lower-level qualifications and people with disabilities.[28] This seems consistent with rising demand leading firms to offer opportunities to those they might have previously been reluctant to employ. The combination of higher employment among traditionally lower-participation groups (who typically have less work experience to their name) and weak investment means this account is also consistent with the UK's recent stagnant productivity growth.

But while these demand arguments are theoretically convincing, as an aggregate explanation for our higher employment level they are unsatisfactory on their own. To understand why, consider the mechanism by which increased labour demand drives higher employment. If labour demand increases (even if initially caused by a downwards wage shock), but the volume of labour households wish to supply at any given wage remains unchanged, then it is upward pressure on pay that brings more workers into the labour market and enables a higher employment equilibrium to be reached. Firms pay more for more workers.

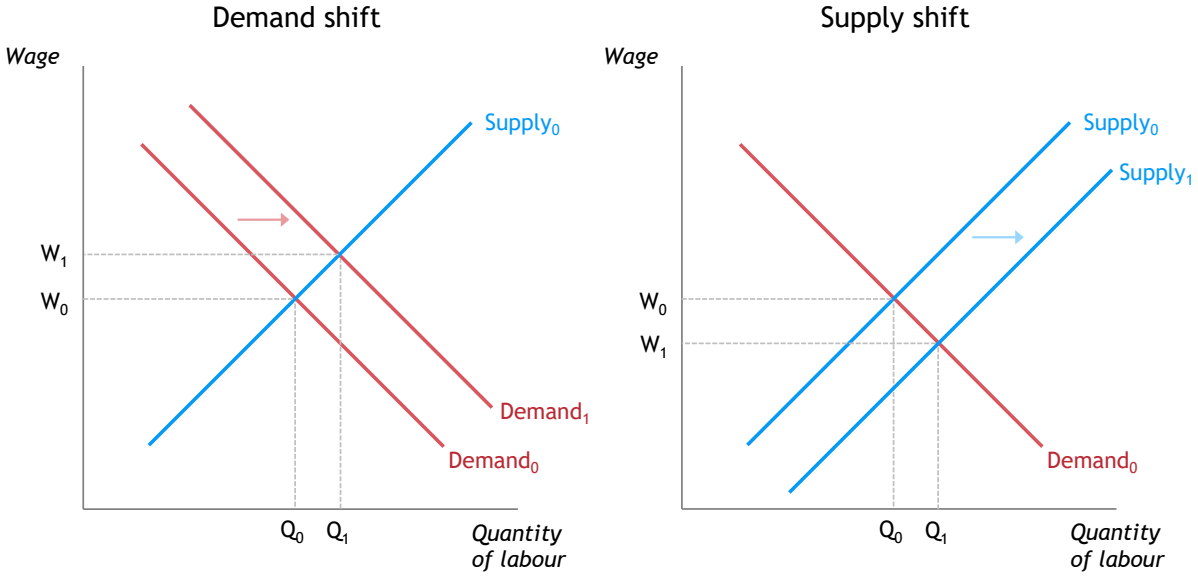
The impact of such an outward shift in the labour demand curve is illustrated in the left-hand panel of Figure 5. We can see that an increase in demand should mean higher employment is accompanied by *upward* pressure on wages, to ensure that firms' increased demand for labour is met. This is of course the exact opposite of what we

25 G Vlieghe, The economic outlook: Fading global tailwinds, intensifying Brexit headwinds, speech at the Resolution Foundation, February 2019
26 Bank of England, Inflation Report – May 2019, May 2019
27 Federal Reserve Bank of St. Louis, Economic Policy Uncertainty Index for United Kingdom, accessed 19 August 2019
28 S Clarke & N Cominetti, Setting the record straight: How record employment has changed the UK, Resolution Foundation, January 2019

have experienced. Real wages are still £2 a week below their pre-crisis peak, and the past decade has been the worst for earnings growth since the Napoleonic Wars.[29]

FIGURE 5: **The labour demand curve shifting out would all-else-equal cause wages to rise**

Illustrative shifts in labour demand and supply curves



An increase in labour supply is a better theoretical fit with the last decade

If an increase in labour demand does not fit the stylised facts of strong employment growth and weak earnings, an increase in labour supply certainly does, as shown in the right-hand panel in Figure 5. More of us want to work, but as a result wages remain weaker than we would have otherwise expected.

So why might a labour supply increase have taken place? Because we've just experienced a global financial crisis and the biggest recession in living memory. One way to think about a recession is that it represents news that we are all poorer than we expected to be, not least via an unprecedented reduction in real wages on this occasion. For a couple with two kids and one median hourly earner working full time, earnings being one-fifth lower today than they would have been had pre-crisis real earnings trends continued translates into a reduction in annual net household income of £1,700, or 6.7 per cent.[30]

29 N Cominetti, How to get a pay rise, Resolution Foundation, August 2019
30 Based on the 2019-20 tax and benefit system, calculated using the RF microsimulation model. We assume that the couple owns their own home. Median earnings are estimated to be £13.07 in 2019-20 (based on ONS, Annual Survey of Hours and Earnings, 2018), and would have been £16.24 had pre-crisis average real earnings growth (2 per cent per year) continued from 2009. The household's net annual income is £24,000 in today's scenario, and £25,700 in the higher earnings growth scenario.

People naturally want to do something about that fact. Given employment income makes up 84 per cent of gross household income,[31] most households looking to boost their incomes must work more – either by increasing employment, or by taking on more hours. Indeed, both strategies might be utilised by those hoping to shield their family finances from the fall out of the pay squeeze.[32] This view – that we're working more because we're poorer – might sound controversial, but it is of course just the opposite of what Keynes told us back in 1930: that as economic progress continues we can (and indeed should) choose to use the bounty of higher productivity and earnings to work less.[33]

But if the answer is that recessions make us poorer and want to work more, then why haven't we seen this employment response in previous ones? There are at least three factors at play. First, and most fundamentally, the post-financial crisis income shock was both bigger and more sustained. Households could not just wait a few years for everything to return to normal. That the enduring nature of the income shock is important in the behavioural response also helps explain why this supply response did not result in a bigger unemployment spike in the recession. It was only in the years after the crisis when it became clear that the income squeeze was enduring that economic inactivity began falling.[34]

Second, the shock was more broadly felt given that we had an earnings, rather than an unemployment, recession. In a traditional unemployment recession the income shock is concentrated on those losing their jobs – who clearly do wish to increase their labour supply but are constrained from doing so. Everyone else's earnings tend to continue growing and their labour supply preferences are largely unaffected. Third, a more flexible labour market than in previous recessions meant that preference shifts (increases in both labour supply and demand) could swiftly feed through into employment levels.

In practice of course labour supply and demand curves are not directly identifiable. And observed weak wages do not prove that a labour supply shock has happened, because plenty of other factors will be affecting wages at the same time. So we turn next from theoretical to empirical arguments for this labour-supply-focused interpretation of record employment.

31 Male gross employment income makes up 51 per cent of gross (equivalised) mean household income, and female employment income a further 33 per cent. See: A Corlett et al., The Living Standards Audit 2019, Resolution Foundation, July 2019

32 This is a related but different argument to that made by Mark Carney: that after a financial crisis labour supply increases as households look to deleverage their balance sheets, i.e. pay down debt. Household balance sheets have now largely been repaired but employment has remained above pre-crisis levels, We would argue that this is because it is the income shock (which still continues) rather than balance sheet effect of the crisis (which does not) that has driven the labour supply response. See: Mark Carney, Speech at the 146th Annual Trades Union Congress, Liverpool, September 2014

33 J M Keynes, Economic Possibilities for our Grandchildren, 1930

34 The 16-64 year old economic inactivity rate has fallen from 23.5 per cent in 2011 to 21 per cent today.

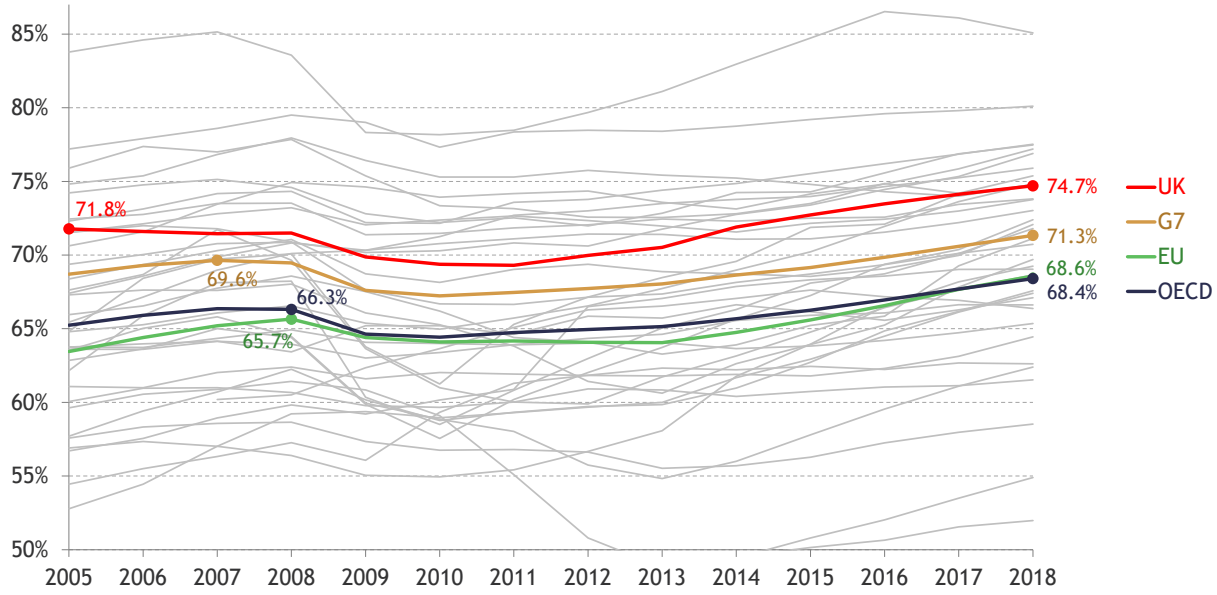
Empirical evidence from around the world supports a labour supply account

What empirical evidence is there that this theoretically plausible argument is a good explanation of today's record employment levels? We offer three pieces of such evidence and note that our argument fits the data better than alternative explanations. We focus on global employment trends and, within the UK, two areas where an increase in labour supply would be visible (working hours and who has moved into work).

Higher employment levels can be seen across most large advanced economies post crisis. The major economic groupings of which the UK is currently a member (the OECD, EU and G7) all had employment rates in 2018 that were 1.7 to 2.9 percentage points higher than pre-crisis peaks, as Figure 6 shows (using a slightly different definition of working age than is common in the UK). The UK's increase is at the top end of this range, as was our earnings squeeze.

FIGURE 6: **Employment rate increases are the norm across advanced economies**

15-64 year old employment rates across advanced economies and economic areas



NOTES: All OECD countries other than the UK are shown on the grey lines.
SOURCE: OECD *Data*

Recognition of these global trends should further encourage us to discount heavily UK-specific explanations for high employment. These include both those related to policy changes, and those related to an increase in labour demand driven by a large Sterling depreciation's effect on the relative price of labour and capital.

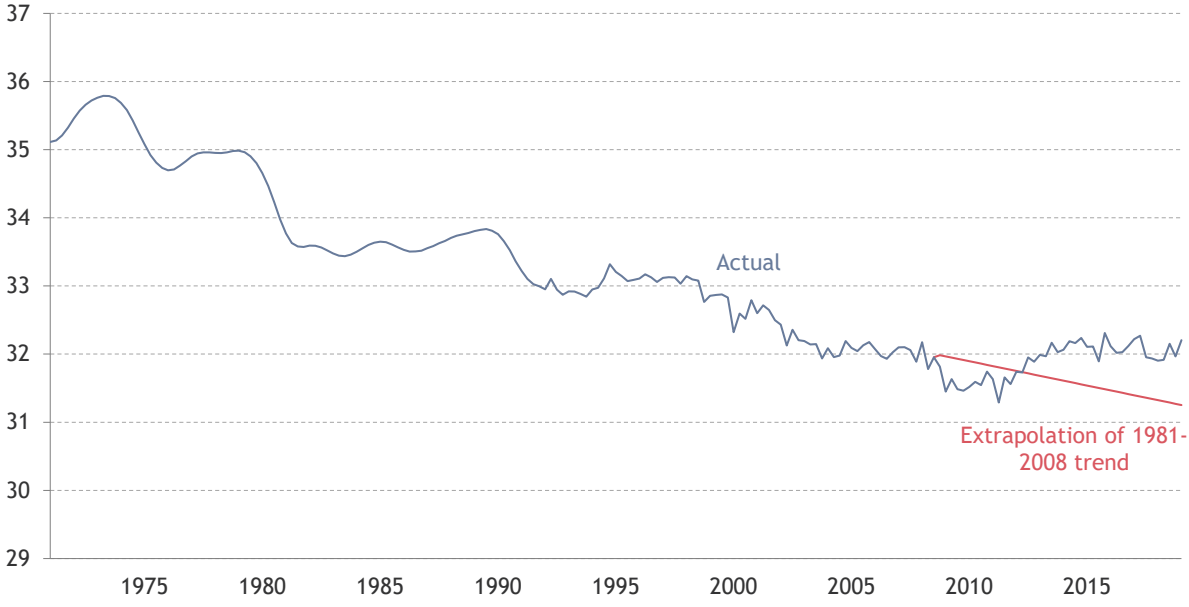
Higher employment across advanced economies is, however, consistent with either greater uncertainty increasing labour demand, or an increase in labour supply. The shared weakness of pay growth fits best with the latter interpretation. The post-crisis shock to household incomes was large and shared across advanced economies: real annual household income growth rates across OECD countries averaged 3.0 per cent between 1998 and 2006, falling to 1.1 per cent between 2009 and 2017.[35] We're supplying more labour because we're poorer than we expected to be, and we're not alone in this.

The UK labour supply boost is evident in the trends in both actual *and desired* working hours

Turning to the components of labour supply in the UK, we see evidence in support of our theory in the jobs market's intensive margin, i.e. the volume of work being done by those in the workforce. Keynes projected we'd all be working only 15 hours a week in the near future. He was wrong on the specifics but right on the direction of travel. As we have got richer as a country we have chosen to spend some of our increased productivity on more leisure time, as Figure 7 shows.

FIGURE 7: **The long-term decline in average working hours has halted since the crisis**

Average actual weekly hours worked among those in employment: UK



SOURCE: RF analysis of ONS, *Labour Market Statistics*

What stands out is that hours reductions came to a halt after the financial crisis hit. We are now working 28 million more hours per week than we would be if the pre-crisis

35 These figures are simple cross-country averages, not weighted for population size. Source: OECD Data

hours reduction trend had continued. This has been driven by a significant change of preferences among workers, with the proportion of people in employment saying they would like to work more hours today still standing at 10 per cent. That is higher than the 9 per cent recorded in 2008, despite actual hours worked being no lower today than they were 15 years ago. More of us are working and we're working for longer, yet many people (largely lower earners) still want to do more. A huge wage hit has boosted labour supply in terms of hours – putting a big historical trend into reverse.

Record employment has been driven by female participation, with household income shocks causing more coupled mothers to want to work

Turning to employment, the key thing to note is that the upward shift relative to 2008 relates primarily to women.[36] Yes, the employment recovery looks like it's fairly evenly split between men and women (47 per cent of the net employment increase since 2012 is male), but that's because men were disproportionately likely to lose their jobs during the downturn. The rise in employment is therefore partly about the restoration of men to the employed population, and partly about the arrival of more women. As Figure 8 shows, the female working-age employment rate is 4.7 percentage points higher than in early 2008, while the male rate is only 1.1 percentage points higher and still a long way off historical records. And this does not simply represent a continuation of the long-term upwards trend of female labour force participation: female employment did not rise at all for nearly four years before the financial crisis.

This female-dominated nature of the employment rise directly supports an increased labour supply view of the past decade. In part this is because the easiest way many coupled households can increase their labour supply, in the face of an income shock to the main earner's wages, is for a second person to enter the labour market. Those second earners are disproportionately likely to be women: of the couples with just one worker in 2007, 74 per cent of them included a non-working woman.[37] Such an account is consistent with academic evidence showing that coupled women's labour supply is responsive to the higher threat of job loss experienced by their partners in recessions.[38]

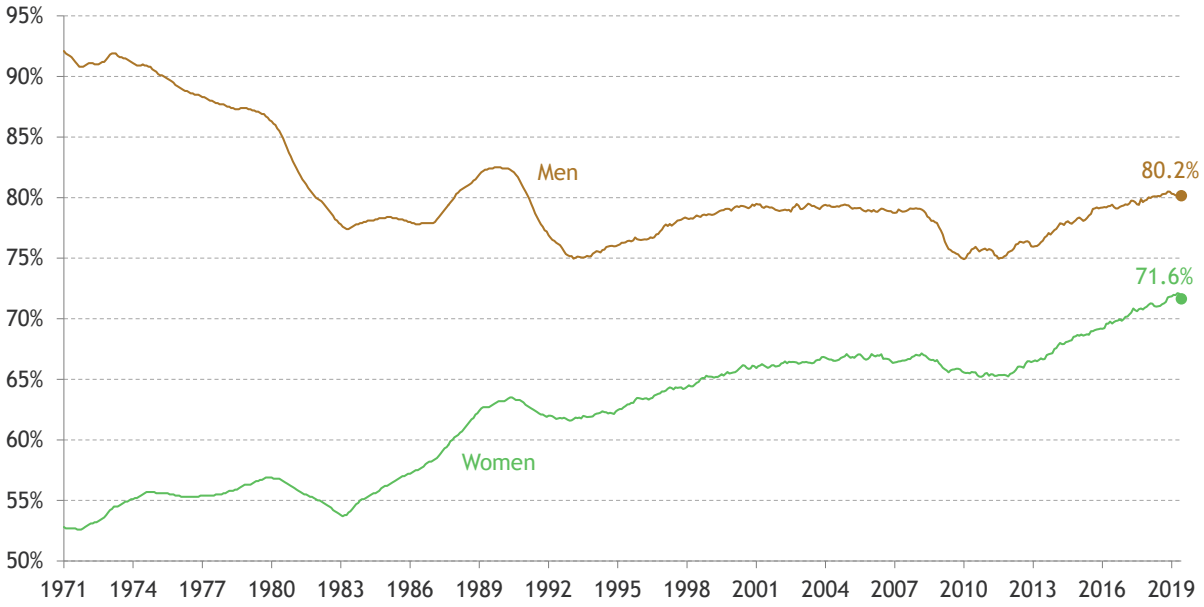
36 As mentioned above, another notable feature of the employment increase is that recent gains have been most pronounced among previously lower-employment groups. This is consistent with the notion that labour demand is the key driver at play. That is, if firms want to make more use of labour, they will inevitably draw most heavily on those currently working the least. However, the employment pattern is also consistent with the labour supply argument. In the absence of the mass unemployment experienced in previous downturns, the level of slack among the most attached members of the workforce was relatively slight. Instead, it is those in relatively disadvantaged groups – and as we discuss in this section, particularly the women within them – who had the most scope for raising their labour supply.

37 RF analysis of ONS, Quarterly Labour Force Survey household datasets

38 See: K Ellieroth, Spousal Insurance, Precautionary Labor Supply, and the Business Cycle, Indiana University, October 2019; S Harkness & M Evans, 'The employment effects of recession on couples in the UK: women's and household employment prospects and partners' job loss', Journal of Social Policy 40(4), October 2011

FIGURE 8: **The female working-age employment rate is at an all-time high**

16-64 year old employment rates by sex: UK



Source: ONS, *Labour Market Statistics*

We can see this effect playing out in Figure 9, which splits out the overall increase in the 16-64 employment rate since 2008 into the contribution made by different groups, based on each group's individual employment rate increase and its share of the overall working-age population. Setting aside the contribution of women in their early 60s for now (we discuss this largely policy-driven phenomenon in greater detail below), we find that the biggest contributions are made by single parents and coupled mothers, with 16-59 year old coupled non-mothers the next-largest contributor.

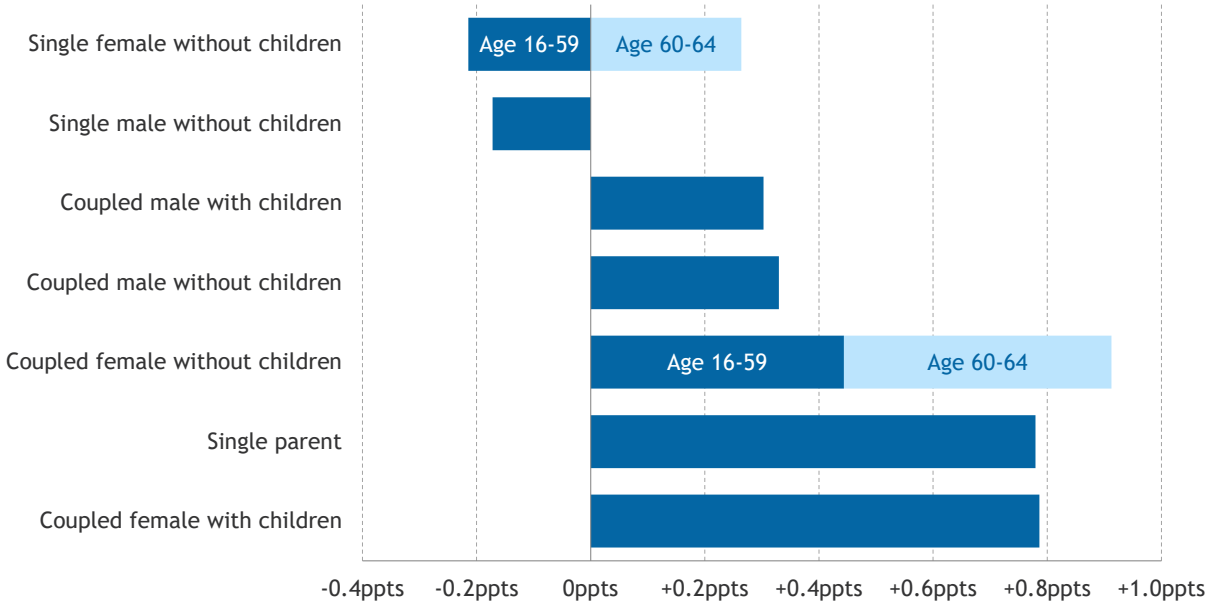
The contribution from single parent employment is a continuation of strong pre-crisis increases: the single parent employment rate rose by 10 percentage points in the decade prior to the financial crisis, and has increased by 14 percentage points (to 68 per cent) in the 11 years since. This outcome reflects a mix of targeted active labour market policies (discussed above) and particular pressure from social security reductions in the more recent period (discussed below). By contrast, employment rates for coupled women were flat during the mid-2000s: the employment rate for coupled mothers rose 0.4 percentage points, and the rate for (16-64 year old) coupled non-mothers fell 1.1 percentage points, in the five years prior to the crisis. But as Figure 9 suggests, these groups then took a very different direction after the crisis began. For example, the employment rate for coupled mothers rose by over 5 percentage points (to 76 per cent) between 2008 and 2019.[39] This evidence is supportive of our account that coupled households in which one adult

39 The statistics in this paragraph are drawn from a mix of the ONS's Quarterly Labour Force Survey and DWP's Households Below Average Income. This is due to a lack of consistent variables identifying different family types in the Labour Force Survey in the pre-crisis years. These two surveys present a very similar picture of employment rate changes in the post-crisis years, so this is felt to be a reasonable approach.

(usually a woman) didn't work were most able to respond to the post-crisis income shock by more household members working.

FIGURE 9: **The working-age employment rate increase has been mainly driven by single parents and coupled mothers**

16-64 year old employment rate change, apportioned by sex and family situation: UK, 2007-08 – 2018-19

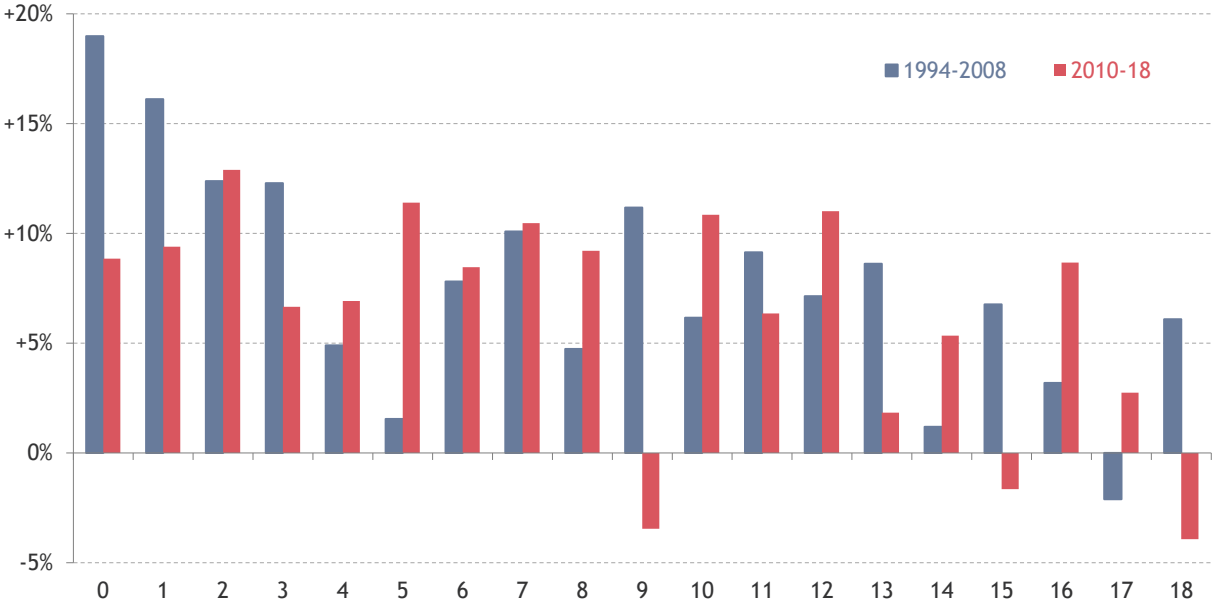


NOTES: These figures reflect the employment rate change for each group over the period, weighted according to the average size of the group within the 16-64 year old population over the period. The prevalence of each of these groups within the working-age adult population barely changed over this period, meaning that this method very closely matches the overall 3 percentage point increase in the 16-64 year old employment rate.
SOURCE: RF analysis of ONS, *Quarterly Labour Force Survey*

Delving deeper into the overall picture presented by Figure 9, there are reasons for thinking that a labour supply response to an income shock would be particularly focused among those with children (the groups that have driven the biggest increases in the overall employment rate, as Figure 9 shows). These households have less capacity to adjust on the cost side, given less flexibility on the housing and childcare they consume. Focusing on coupled parents, Figure 10 provides evidence for such an income shock response, rather than an ongoing response to the steady increase in state support for childcare for working parents, for example. While the pre-crisis increase in dual earning was much stronger among those with younger children (consistent with an increase in childcare support that would mainly benefit this group), the post-crisis increase has been evenly spread across parent couples with youngest children of different ages. It seems reasonable that it is the hit to the main earner's wages, rather than extra childcare support, that has been the main driver of this huge change.

FIGURE 10: **Since the crisis, the increase in dual earning for coupled parents has been spread across those with younger and older children**

Change in dual-earner status among 16-64 year old coupled parents, by age of youngest child: GB/UK



NOTES: UK from 2002-03, GB before. This analysis captures all adults aged 16-64, rather than those in 'non-pensioner' families (those containing no adults above State Pension age) – the definition more commonly used in analysis of this dataset.
SOURCE: RF analysis of DWP, *Households Below Average Income*

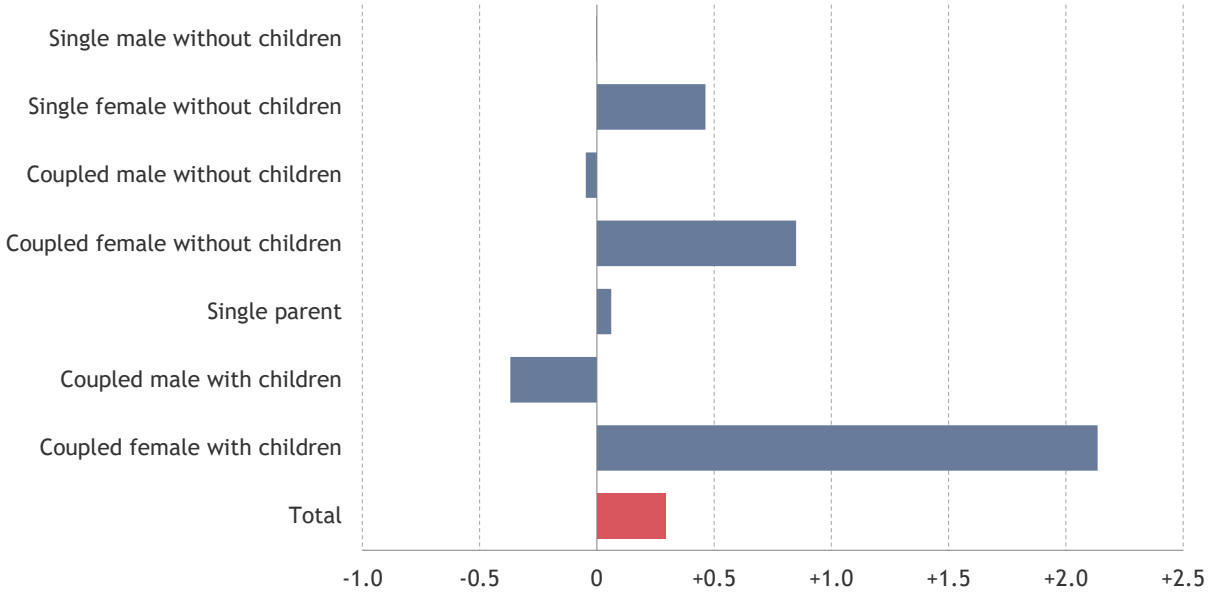
It's not only in the decision to enter work that we see evidence of female labour supply responding to an income shock. The fact that working hours are no longer falling (discussed above) has been driven by women (particularly coupled mothers) actually increasing their working hours over the past decade, as shown in Figure 11.

Of course, a sensible challenge to these arguments is that there is a reason the supply curves in Figure 5 are downward sloping – weak wages should not, all else equal, be attracting people into the labour market. But the key here is to recognise that different things have happened to main and second-earner wages over the past decade. While wage growth overall has been terrible, it has been by far the strongest for low hourly earners, as the minimum wage has been ramped up. These low hourly earners are disproportionately likely to be female: three-fifths of employees in the bottom decile of hourly pay are female, compared to less than one-third in the top decile.[40]

40 2008-18 average. Source: RF analysis of ONS, Quarterly Labour Force Survey

FIGURE 11: **In-work coupled mothers are working an average of 2 hours more per week, compared to a decade ago**

Change in average hours worked by 16-64 year olds: UK, 2007-08 – 2018-19



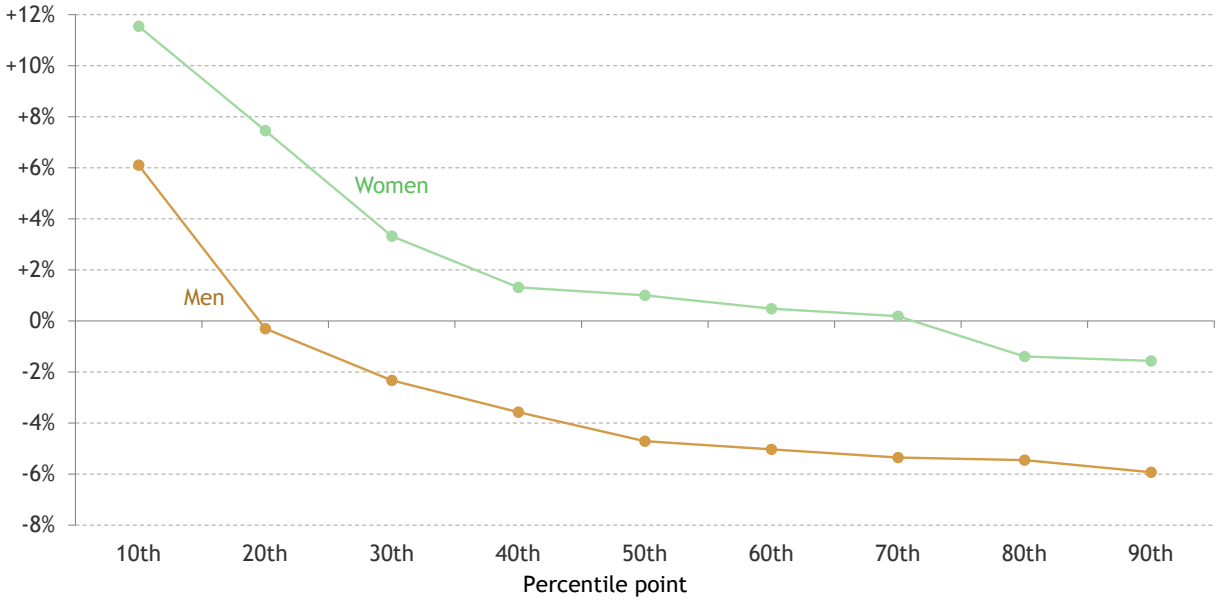
SOURCE: RF analysis of ONS, Quarterly Labour Force Survey

As Figure 12 shows, this has contributed to the fact that female earnings growth has been stronger across the board over the past decade, with particularly strong growth for the lowest-earning women. This is important because new (mainly female, over the past decade) labour market entrants are disproportionately likely to enter work on low earnings, where wage trends have been relatively much more positive, particularly in comparison to the higher-earning men they may be coupled up with.

So the hit to most main earners' wage growth, and therefore family incomes, has pushed second earners into the labour market. But it has been combined with a relative increase in the 'pull', or financial incentive, for second (lower) earners to enter work.

FIGURE 12: **Female employees have had stronger earnings growth, particularly the lowest paid**

Growth in real (CPIH-adjusted) hourly employee pay (excluding overtime) across the distribution by sex: UK, 2009-19



NOTES: Earnings distributions are calculated separately for men and women.
SOURCE: RF analysis of ONS, *Annual Survey of Hours and Earnings*

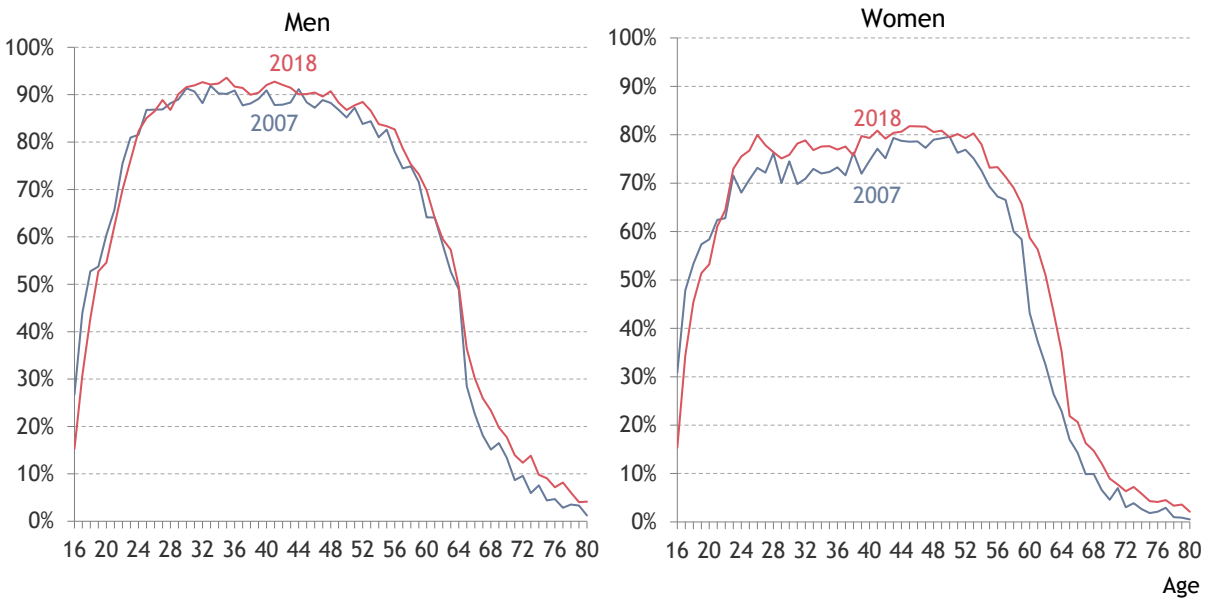
Social security policy changes have pushed down on the incomes of specific groups, contributing to the supply effect

There are income shock elements beyond the recession and subsequent slow earnings growth that have contributed to rising labour supply in recent years. Among older women for example, there is clear evidence that the increase in the State Pension age (SPA) from 60 to 65 has increased employment rates for those affected.[41] Figure 13 shows that the increase in female employment has taken place right across the age range (except for those under 20, given more time spent in education), but with bigger increases for older women, driven by the SPA change. This reinforces the conclusion of Figure 9, which showed that rising employment among 60-64 year old women accounts for around one-third of the overall increase in the 16-64 year old employment rate over the past decade.

41 N Amin-Smith & Rowena Crawford, 'State pension age increases and the circumstances of older women', in J Banks et al. (eds.), The Dynamics of Ageing: Evidence from the English Longitudinal Study of Ageing 2002-16, Institute for Fiscal Studies, October 2018

FIGURE 13: **Female employment rates have increased particularly rapidly in the late 50s and early 60s**

Employment rates by age and sex: UK



SOURCE: RF analysis of ONS, *Quarterly Labour Force Survey*

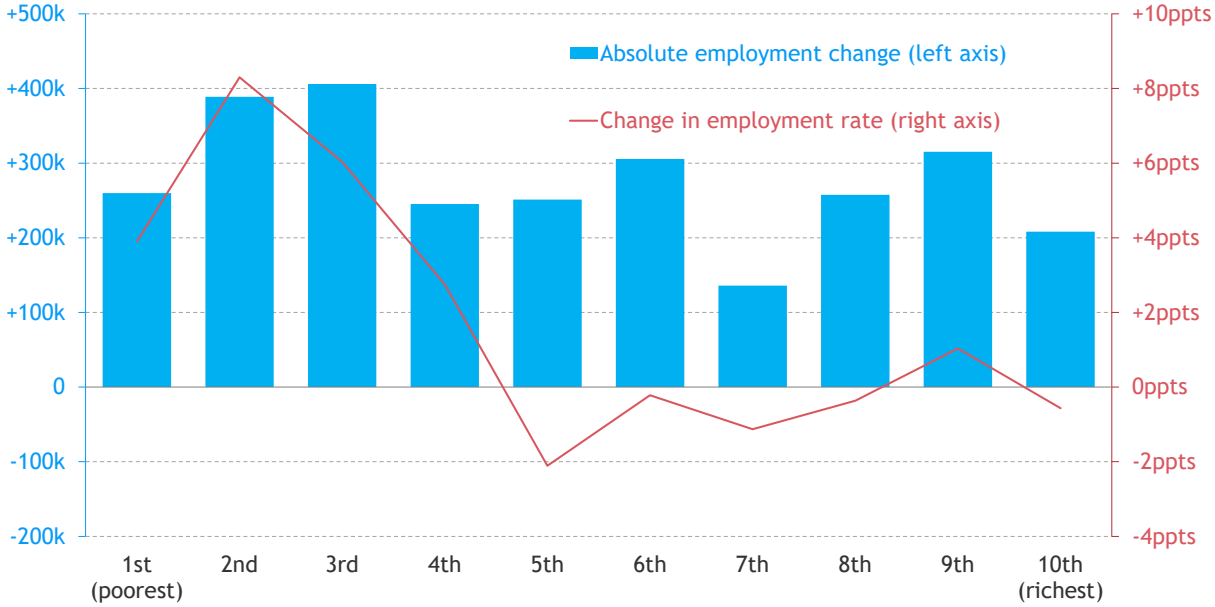
Other benefit reforms are also likely to have played a role in higher employment. This has not come via the roll-out of UC mentioned previously, but through a more generalised reduction in the value of support, which has driven down incomes. These reductions in benefit generosity, alongside the increase in the minimum wage providing a pull into work, may in part explain why employment increases have been greatest among lower-income households, as depicted in Figure 14.

This pattern of employment changes is consistent with the fact that income from benefits has fallen furthest at the bottom of the income distribution. Over the past decade, real equivalised income from benefits fell by 14 per cent in the bottom decile and 13 per cent in decile 2, compared to falls of less than 1 per cent across the top half of incomes.[42] Of course, this reduction in benefit income is itself partly the result (rather than simply the cause) of the higher employment among these groups that we are trying to explain. More work means fewer people claiming out-of-work benefits, and others claiming less in means-tested benefits.

42 This analysis covers GB only. Source: RF analysis of DWP, Households Below Average Income

FIGURE 14: **Employment growth has been strongest in the bottom half of the working-age income distribution**

Change in employment among 16-64 year olds, by decile of the working-age equivalised net household income distribution: UK, 2007-08 – 2017-18



NOTES: Distribution calculated on the basis of income after housing costs.
SOURCE: RF analysis of DWP, *Households Below Average Income*

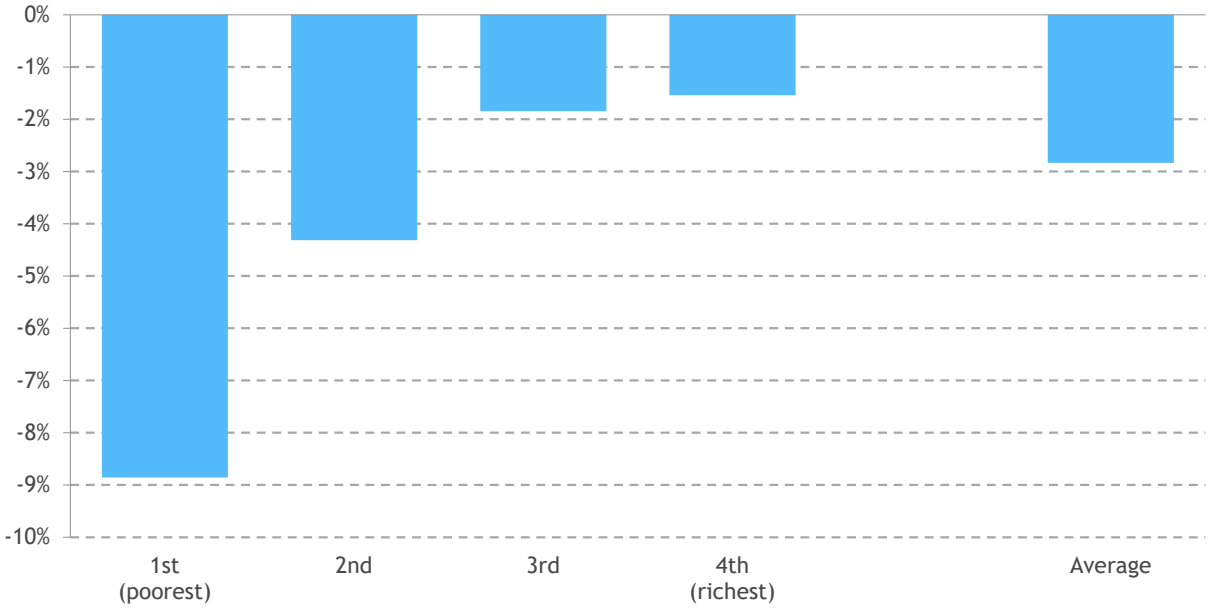
But the bigger driver of benefit income falls for poorer households is policy change, as Figure 15 shows. We simulate the effect on household incomes of benefit changes since 2010, holding constant everything else – including employment levels and hours worked. The results show substantial policy-led benefit income reductions for low- and middle-income households.[43]

The analysis in Figure 15 is borne out by a 'case study' approach. For example, a workless single parent with two children in social-rented accommodation has an income today that is £2,000 lower than it would have been absent the billions of pounds of benefit cuts rolled out since 2010.[44]

43 Personal tax changes have had an offsetting positive effect on incomes, apart from in the top quartile where they have reduced incomes slightly (but to a lesser extent than benefit changes).
44 Based on the 2019-20 tax and benefit system, calculated using the RF microsimulation model. The household's net annual income is £15,400 in today's scenario, and £17,400 in the scenario in which the benefit system remains as it was in 2010.

FIGURE 15: **Welfare policy changes have reduced incomes for those at the bottom of the income distribution most**

Change in weekly incomes resulting from changes to the benefit system since 2010, by quartile of the working-age equivalised net household income distribution: UK

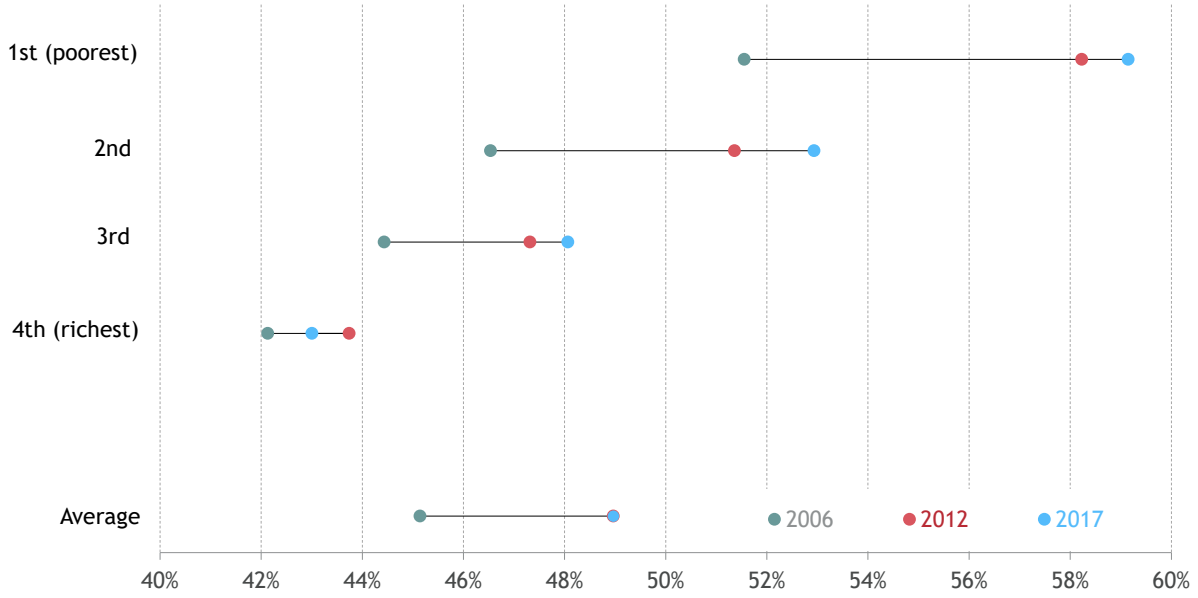


NOTES: Distribution calculated on the basis of income after housing costs. Full details of the modelling approach are provided in Annex 1 of: J Smith et al., Recession ready? Assessing the UK's macroeconomic framework, Resolution Foundation, September 2019
SOURCE: RF analysis of DWP, *Households Below Average Income* using the IPPR tax-benefit model

As with couples with children, we would expect to see the largest labour supply response for the groups with the least potential to cut costs. And it is true that poorer families not only spend the greatest proportion of their income on essentials (food, fuel, clothing and transport), but have experienced the biggest increases in spending on essentials in recent years, as Figure 16 shows. Spending on such 'essentials' rose to 59 per cent of the bottom quartile's total consumption in 2017-18, up from 52 per cent ahead of the financial crisis and significantly higher than recorded by any other income group.

FIGURE 16: **The proportion of 'essentials' in total spending increased sharply for lower-income households**

Proportion of equivalised non-housing household consumption spent on 'essentials', by quartile of the working-age equivalised net household income distribution: UK



NOTES: 'Essentials' covers food, fuel, clothing and transport. Distribution calculated on the basis of income after housing costs. We present trends in consumption for each individual, rather than just for the head of the household.
SOURCE: RF analysis of ONS, *Living Costs & Food Survey*

In sum, the reduced generosity of in-work welfare support has added to the effect of weak primary earners' wages to create the income shock that has driven second earners to enter work or increase their hours. In addition to this effect, the reduced generosity of out-of-work benefits will have driven broader increases in work incentives, perhaps explaining some of the employment increase for the other groups shown in Figure 9, above. And both of these income shocks have been most keenly felt by those with the least potential to adjust their spending, including the poorest and those with children.

There is wider support for the idea that household preferences shift in the face of income shocks

Finally, while our focus has been on responses on the income side, households might look to make adjustments to an income shock in other ways. Households always have the option of adjusting to an income shock by cutting non-essential costs instead of trying to increase income. But they have also made more fundamental changes that have big implications for their essential spending requirements: they are having fewer babies.

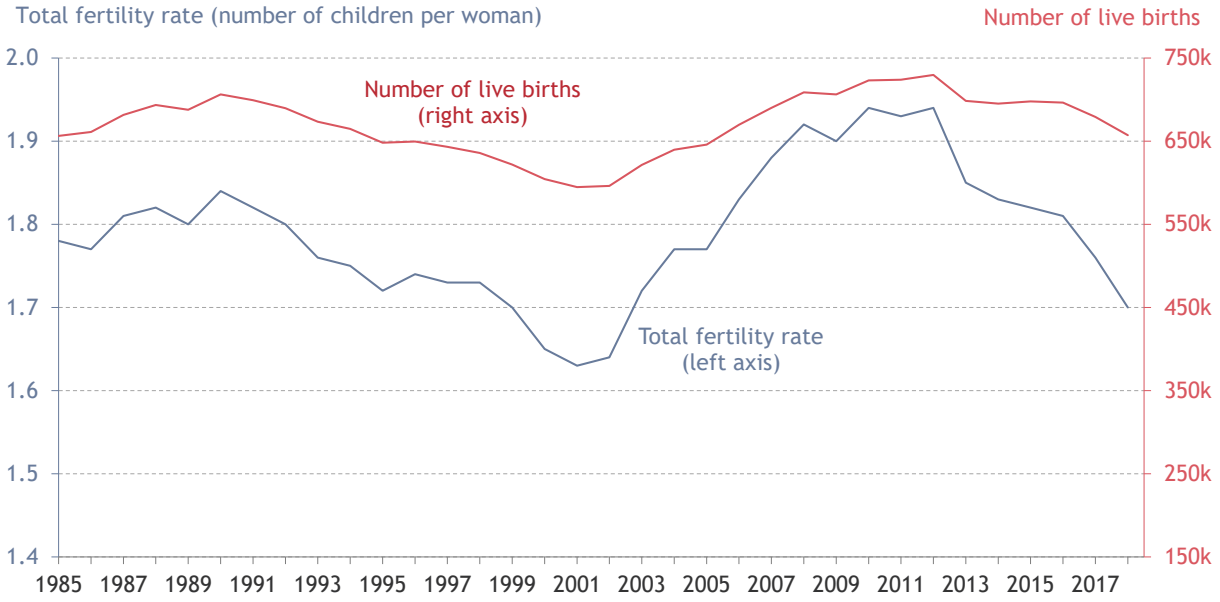
Figure 17 shows that, after rising through the 2000s due to factors including delayed parenthood among women who drove the surge in university attendance in the 1990s,[45]

45 'End of the baby Boom? – Britain's birth rate', The Economist, 16 July 2014

fertility has been falling through the 2010s. There will be a number of drivers of this outcome, including improved contraception and difficulty conceiving due to later childbearing.[46] But the Office for National Statistics has argued that income pressures, via things like benefit cuts and higher housing costs, have also played their part in lowering fertility.[47] Importantly, immigration does not drive this conclusion: the trends look very similar if we focus only on UK-born women.

FIGURE 17: **The birth rate has declined since the financial crisis**

Births and fertility: England and Wales



NOTES: Based on live births occurring in each calendar year. The total fertility rate is the average number of live children that a group of women would bear if they experienced the age-specific fertility rate of the calendar year throughout their childbearing lifespan.
SOURCE: ONS, *Births in England and Wales*

There are important policy lessons from this reading of the drivers of Britain's employment boom

So there is strong evidence that the income squeeze associated with the financial crisis has resulted in more of us working, more of us working longer hours, and more of us wanting to work more hours still. Increased demand for labour among firms and our flexible labour market have both been enablers of this shift, but they cannot explain its key features or timing. But understanding this distinction is not just an exercise in satisfying backward-looking intellectual curiosity. There are important lessons too for policy makers of two distinct groups: those with responsibility for our labour market and those with responsibility for macroeconomic policy.

46 Office for National Statistics, Births in England and Wales: 2018, August 2019
47 Office for National Statistics, Births in England and Wales: 2013, July 2014

On the labour market, the key conclusion is that our record employment is still something to be welcomed. Concluding otherwise is to confuse something having an unwelcome cause with it being unwelcome in its own right. The bad thing is it starting to rain, not the fact that you choose to put up an umbrella. It is true that real working-age incomes are today only 4 per cent above their pre-crisis levels, rather than the 28 per cent growth we might reasonably have expected.[48] But the income effect associated with the very tight post-crisis wage squeeze and sluggish subsequent recovery would have been considerably more severe in the absence of the increases in employment and stalling of hours declines recorded over this period. And higher employment has also narrowed the too-large employment and income gaps that exist between different groups and different parts of the UK.[49] These changes are very real improvements that should be valued.

Labour market flexibility allowed workers to turn their preference for increased labour supply into a reality of more work, and that fact should also be valued. But it has left us with a legacy of too much insecure work. So, while we should welcome increased employment and the supporting role played by labour market flexibility, we should take advantage of the tightness of the labour market to reduce the abuses of less secure work forms, including zero-hours contracts.

Maintaining a higher employment rate over the coming years should now become a policy goal – but we should focus on the right path to that outcome. Employment might remain high because sustained and strong income growth remains elusive, meaning labour supply remains elevated for negative reasons. But a new higher full employment level might also flow from positive path dependency, whereby equilibrium participation rates are pushed up. Indeed, locking in this reverse hysteresis in order to boost participation among some groups and places should be an explicit goal of policy. On the flipside, we should aim to restart the long downward trend in the length of the average working week, on the understanding that it is driven by strong earnings growth.

For macroeconomic policy makers in the Bank of England and HM Treasury, there are more complex lessons. First, this analysis supports the argument that the Phillips Curve (the idea that an inverse relationship exists between labour market slack and wage growth) is alive and well.

It does, however, add to our understanding of why it has shifted. Specifically, this focus on increased labour supply helps us understand why a higher employment level would need to be reached post crisis before wage pressures start to build. To some degree, this is a more negative reading of the labour supply increase we have seen – it delayed the

48 And even the weak growth we have had has relied on falling housing costs among those fortunate enough to hold a mortgage. See: A Corlett et al., The Living Standards Audit 2019, Resolution Foundation, July 2019

49 S Clarke, Mapping gaps: Geographic inequality in productivity and living standards, Resolution Foundation, July 2019

point at which rising employment begins to drive the virtuous cycle of rising pay and productivity. Indeed, it is only very recently that difficulty filling posts and holding onto staff has driven firms to offer pay rises anything like those seen before the crisis. In the United States, that point has still not been reached. This explanation for a shift in the Phillips Curve is much more plausible than arguments that the shift has been driven by reduced union power or increased labour market flexibility – neither of which has substantially changed since the crisis. It also goes further than arguments which state that weak wage growth follows from these being more slack than implied by traditional measures like unemployment, to explain why that might be the case – a labour supply increase.

You could conclude from this that, while at an individual level increased labour supply helped protect incomes, collectively it may have hurt labour by contributing to (rather than just being caused by) weak earnings growth. Indeed, 'paradox of toil' arguments suggest there are theoretical mechanisms via which households can make themselves worse off through higher labour supply.[50]

But this is the wrong conclusion for policy makers – or at least not the first best conclusion. Instead, the lesson is that an earlier recognition of the crucial role of labour supply in driving up employment would have led macroeconomic policy makers, here and in other advanced economies, to expect structurally higher employment before wage pressure would build. All else equal, this would have supported running a looser macroeconomic policy in years gone by. Less time should have been spent questioning whether the Phillips Curve still exists and more time focusing on reaching (new and higher) full employment.

This is easy to say with hindsight and less obvious at the time, but the lessons for the future, at least, are clear. Having waited so long to reach full employment we should do everything possible to maintain it, and the earnings growth we have been missing for so long. While some earnings and productivity growth is likely to have been lost for ever, the potential for some 'making up of lost ground' growth should exist. And in future crises, the macroeconomic lesson is that policy should be set with an eye not just to what equilibrium employment was before things took a turn for the worse, but also to what any income shock may have done to it in the course of that crisis.

As we head into the fourth election since the financial crisis and await the news of who the next governor of the Bank of England will be, policy makers in both Whitehall and Threadneedle Street should ensure that we take the right lessons from this extraordinary decade for employment and pay with us into the 2020s.

50 G Eggertsson, The paradox of toil, Federal Reserve Bank of New York, March 2010

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