#GE2019Economists

The research evidence on key issues for voters in the 2019 UK General election
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Introduction

#GE2019Economists

The research evidence on key issues in the 2019 UK General Election

The general election of 2019 was called after negotiations over how the UK should leave the European Union became increasingly tortuous. While Brexit may have been the trigger for the election, it was far from being the only issue debated during the campaign.

The Centre for Economic Performance has produced 11 briefings covering key issues in the election campaign. These provide impartial, evidence-based analyses of topics and give policy suggestions. The briefings go beyond party manifestos to look at the vital issues that are being overlooked – as well as giving context to what is being discussed.

This report brings together those briefings.

In their analysis of the UK economy Anna Valero and John Van Reenen note that the UK has suffered a “lost decade” of productivity growth, pointing out that if the UK had followed the three-decade trend prior to the global financial crisis of 2008-09, productivity would be 24 per cent higher today. They conclude that the main parties’ promises to increase spending are welcome, but say that public borrowing for current spending is not sustainable and taxes will need to be raised to pay for such spending.

A look at the labour market reveals that while the UK has enjoyed record high rates of employment since 2015, this is masking concerns about the increasing number of precarious jobs and low wage growth. Stephen Machin, CEP’s director, and Rui Costa pick apart the figures to reveal that the labour market is playing Dr Jekyll and Mr Hyde, with real wages still below pre-recession levels for most workers and insecure employment on the rise.

Brexit has been the centre of political debate in the UK since the referendum in 2016, but how is it affecting the economy? Swati Dhingra and Thomas Sampson show that the vote has already made households worse off by reducing growth and raising the cost of living – and predict that a “hard Brexit” would reduce national income by up to £2,500 per person per year compared to staying in the EU. They conclude that all forms of Brexit are forecast to make the UK worse off economically than remaining in the EU and recommend closely monitoring the effect in different places.

Immigration policy remains a contentious issue in the UK but Jonathan Wadsworth points out there is no easy answer as to what to do or prioritise. The situation is not helped, he says, by different estimates of the number of immigrants in the UK which give contradictory messages. But while immigration matters politically, the economic effects either way seem to be small.

Social mobility tells us how likely we are to climb up (or fall down) the economic or social ladder of life. Lee Elliot Major and Stephen Machin use published research and material from their upcoming book What Do We Know and What Should We Do About Social
Mobility? to show how downward mobility, that is children doing less well than their parents, is becoming a reality for an increasing proportion of people. They suggest that a fairer education system, a stronger economy and a more collective, community-based culture would boost social mobility and social justice.

Expenditure on education can improve pupils’ learning, but there is evidence that large-scale structural reform has not been successful in improving educational outcomes, say Jo Blanden, Sandra McNally and Gill Wyness in their analysis of education and skills. They conclude that the focus needs to be on the recruitment and retention of high quality teachers, and warn that politicians need to do more for the “forgotten third” of young people who fail to get good GCSEs – as the long tail of poorly performing pupils is a major weakness of the UK education system.

CEP’s research director Henry Overman calls for a new approach to tackle the “profound and persistent” regional divides in the UK. He reveals that it is the increasing concentration of skilled workers – together with a growing earnings premium for graduates – which is the most important factor behind increasing inequality between places. Tackling the problems of “left behind” places will need substantial intervention across a wide range of policy areas, he concludes.

Paul Cheshire and Christian Hilber look at the housing market and warn that the affordability crisis is spreading far into the wider national economy. House prices have grown faster in the UK than in any other developed country and economic productivity is being damaged as high house prices are excluding workers from jobs. Their analysis recommends changes to the tax and planning system in order to encourage house building.

Meeting the UK’s ambitious “net zero” target will require a ramping-up of climate change policies to reduce carbon emissions, to support deployment of renewable energy sources and to encourage more research on “clean” technologies, conclude Ralf Martin, Petra Sarapatkova and Dennis Verhoeven. Their analysis of energy and climate change warns that a key factor causing lower emissions growth over the last ten years has been the slow recovery from the global financial crisis – but this slow recovery also means there has been a lack of investment in research and development, which could make it harder to reduce emissions in the long run.

There is a clear need for increased funding for the health services say Michael Anderson, Alistair McGuire and Elias Mossialos in their analysis of health and social care. They add that while the main political parties’ proposals all take the UK either closer to, or above, historical levels of NHS expenditure growth, whether this is enough to improve services adequately remains an open question. They show that social care, which is inextricably linked to healthcare, is in an even worse position in terms of expenditure allocation.

Finally, in an analysis of policing and crime, Tom Kirchmaier says that austerity has had a considerable negative impact on the size of police forces in the UK. He points out that while all parties have pledged to recruit tens of thousands of new officers, it is not clear whether such targets are achievable. Recruiting more officers will also generate more workload for the rest of the criminal justice system, he adds, meaning staffing here will need to be considered too.

December 2019
Helen Ward, Editor
The UK Economy: Policies for Investment and Productivity Growth

CEP ELECTION ANALYSIS

Anna Valero and John Van Reenen

November 2019

Summary

• The UK has suffered a ‘lost decade’ of near zero productivity growth. If productivity had grown on its pre-2010 trend (from the previous 30 years), it would be 17% higher today – around £5,000 per person.

• Woeful productivity is reflected in pitiful wage growth. Average earnings (after inflation) are about the same level as they were just before the financial crisis – the longest pay stagnation for centuries.

• The positive side of low wages is that there are plenty of jobs: the proportion of prime-age adults with jobs is 76%. Higher than historical peaks of 73% after previous recoveries from recessions. But underlying the strong aggregate performance, there has been a considerable compositional change, with a significant rise in the share of poor quality jobs.

• Boris Johnson’s Brexit deal would be likely to reduce national income per person by more than 6% over the next decade relative to the Liberal Democrats’ policy of remaining in the EU. If Labour were to preside over a soft Brexit, this would reduce rather than eliminate the economic damage.

• One of the reasons for the UK’s longstanding weak productivity is low investment in long-term assets in infrastructure, innovation and skills. Current investment is depressed by uncertainty over the form of Brexit, which will not be resolved until a comprehensive deal with the EU is reached, which will take many years. But the main damage to domestic and overseas investment is due to what will undoubtedly be the negative effects of Brexit on the size of the UK economy. ‘Resolving’ the uncertainty with a hard Brexit will make this loss of investment even worse than it currently is.

• The willingness of the main parties to borrow more to invest is welcome. But public borrowing for current spending is not sustainable, especially in the event of a negative Brexit shock. All parties would need to raise taxes to pay for spending if an inflationary spiral is to be avoided.
The Labour Market

CEP ELECTION ANALYSIS

Rui Costa and Stephen Machin

November 2019

Summary

- UK employment growth has been strong in the last few years, reflecting a jobs boom, with employment and unemployment rates respectively at record highs and lows.

- But at the same time, wage growth has been extremely weak with real wages stagnating or falling for most workers since the late 2000s. Low wage workers have done better due to mandated minimum wage increases outpacing inflation.

- The UK’s recent wage growth compares poorly internationally. Out of 34 OECD countries, only Greece experienced lower real wage growth between 2007 and 2018.

- The low measured unemployment rate masks that labour market slack is higher than it suggests as average hours have fallen and under-employment has risen.

- Solo self-employment has risen very sharply and is the main source of jobs growth in the UK labour market.

- Insecure employment is on the rise via more low wage positions, including zero hours contracts and new forms of alternative work arrangements (frequently being experienced by the solo self-employed).

- Key policy options for discussion include: proposed sizable increases in minimum wages; the tax and social insurance treatment of the solo self-employed; and the need for productivity to increase to get wages up across the board.
This briefing summarises CEP forecasts of the long-run effects of leaving the European Union on average incomes in the UK, as well as CEP research on how the Brexit vote has already affected the UK economy.

All forms of Brexit are forecast to make the UK worse off economically than remaining in the EU.

The Conservative Party’s policy is for future UK-EU relations to be based on a free trade agreement. This option is estimated to reduce UK income per capita by up to 6.4%.

Labour’s preferred Brexit policy is hard to pin down, but it is likely to involve closer trade relations with the EU than Conservative policy. A soft Brexit that maintained a customs union with the EU is estimated to reduce UK income per capita by up to 4.9%.

The vote to leave the EU has already reduced UK output, raised the cost of living and led to reductions in real wages and investment.

UK GDP is estimated to be around 2% or £43 billion lower because of the vote to leave the EU.

The depreciation of sterling caused by the referendum result increased consumer prices by around 2.9%, costing the average UK household £870 pounds per year.

Real wages have stagnated since the referendum. Real wage growth has turned negative in sectors that need more imported inputs and are facing increased cost pressures due to the depreciation of sterling.

From an economic perspective, the best policy would be to cancel Brexit. If Brexit goes ahead, policy should focus on prioritising a deep trade deal with the EU, putting services trade, labour and investment high on the negotiating agenda and mitigating the economic impact of Brexit on local areas and workers.
Summary

- Immigration still seems to matter much more politically than it does economically. Immigration’s effects on most areas of the economy appear to be small. There are neither large negative effects nor large positive effects.

- Unlike the UK-born population, a majority of immigrants are in work. Immigrants are also over-represented among the unemployed and economically inactive, and under-represented in the child and pensioner populations. These observations help to explain why, on average, immigrants pay more in taxes than they receive in state benefits relative to others.

- Future immigration policy has to determine who is allowed into the UK, into which sectors of the economy, for how long and at what cost. Given the diverse and changing use of migrant labour in different sectors, this is not, and has never been, a straightforward task.

- Immigration policy and informed debate are compromised further by the current ambiguity over measuring the numbers of immigrants in the UK.
Social Mobility

CEP ELECTION ANALYSIS

Lee Elliot Major and Stephen Machin

November 2019

Summary

• Britain, alongside the United States, has lower intergenerational income mobility than other developed countries.

• There is a strong link between a country’s level of income inequality and intergenerational immobility. When the rungs of the income ladder are wider apart, the chances of climbing the ladder are lower.

• Britain’s low relative social mobility arises in particular from ‘stickiness’ among the richest and poorest in society.

• Real wage stagnation has resulted in falling absolute social mobility with many people’s living standards being no better than their parents were in the previous generation. Younger people have been hit even harder in terms of drops in intergenerational home ownership mobility.

• There are substantial differences in social mobility at the local level: where you grow up makes a difference to how much your family background affects your life chances.

• Low social mobility is driven by education inequalities and work inequalities. The former reflect an ever-escalating educational ‘arms race’; the latter that individuals from wealthy backgrounds now accrue a higher earnings return in the labour market from their higher qualifications. Similarly, the pay premium from attending private school has risen. At the same time, the kind of jobs available in the labour market is rapidly changing.

• These intergenerational patterns have been one factor behind economic, social and political fractures affecting individuals and communities. The clearest example is the very strong spatial correlation between low social mobility and voting to leave the European Union.

• Small tinkering and minor tweaks of existing policies will simply not be enough to tackle Britain’s social mobility problem. More radical reforms are needed underpinned by four underlying principles: collectivism; fairness; community; and decency. It is entirely possible to create a collective community-based culture, a fairer education system, a stronger economy and a more equal society that would boost social mobility.
Education and Skills

CEP ELECTION ANALYSIS

Jo Blanden, Sandra McNally, Gill Wyness

November 2019

Summary

- A major weakness in the UK is the long tail of poorly performing schools and pupils, where the UK does not perform well relative to other countries, especially on basic skills.

- Austerity has caused school expenditure to fall dramatically and this is likely to have had big detrimental effects on the learning of young people, especially those from disadvantaged backgrounds.

- Large-scale structural reform – converting schools into academies – has not been successful for the most part. The focus needs to be on recruitment and retention of high quality teachers.

- The few people who attend private schools have a significant advantage in school examinations, in the probability of attending university and in the labour market.

- A third of young people do not get good GCSEs and often languish in the education system and the labour market. They are in danger of being forgotten in the election debate.

- Whether apprenticeships are a good investment depends on the type of apprenticeship on offer and whether they are directed at younger or older people. The debate on employer investment in skills needs to be widened beyond use of the apprenticeship levy.

- To date, expansions of early years provision has not been very successful in improving child development. As this policy also has fairly small effects on labour supply, this policy is primarily a financial transfer to working families.

- The increase in university tuition fees does not appear to have discouraged full-time enrolments. The recent Augar review has much to say about the financing of higher education. Whether political parties will engage with the detail remains to be seen.
People, Places and Politics: Policy Challenges of the UK’s Uneven Economic Geography

CEP ELECTION ANALYSIS

Henry G. Overman

- Economic performance varies widely between different places in the UK. On some measures, the performance gap has widened since the financial crisis. There is a broad North-South pattern, but also substantial variation within those areas.

- Having a better educated labour force is the most important driver of local economic performance. An increasing concentration of more educated workers in certain places and a growing earnings premium for graduates are the most important factors behind increasing spatial inequality.

- City size also matters, but much less than skill composition. Smaller towns can do well if they have lots of highly skilled residents. Bigger cities may struggle if they have lots of low-skilled residents.

- On some measures, London receives a disproportionate share of infrastructure investment. A more equal distribution would slow growth in London and might increase growth elsewhere, depending on how and where the money was spent. But the only way for infrastructure to have a big effect on spatial disparities is if it leads to the relocation of large numbers of skilled workers away from London.

- Local government in England has borne the biggest burden of austerity and cities in the North of England have been hardest hit. Austerity reduced redistribution and so it is partly responsible for the recent widening of spatial disparities.

- Providing a counter-balance to London may require some investment to be more spatially focused – for example, focusing infrastructure investment on a number of places, spread across the UK, that are doing relatively well with the aim of increasing productivity and employment in those areas. Policy then needs to make sure that people in disadvantaged communities can access the opportunities generated, which will require substantial intervention across a wide range of policy areas.

- Improving economic performance and helping to tackle the problems of ‘left-behind’ places are important policy objectives. But ultimately, we care about people more than places. Policies should be judged on the extent to which they improve individual opportunities and on who benefits, rather than whether they narrow the gap between particular places.
Housing

CEP ELECTION ANALYSIS

Paul Cheshire and Christian Hilber

November 2019

Summary

- Housing in London is the most expensive in any major prime city in the world. Over the last 40 years, the cost of housing in the UK grew faster than in any other OECD country, far outstripping earnings growth.

- Housing affordability deteriorated sharply after 2000 and, with a pause for the global financial crisis, has continued to get worse. The median house price in Greater London is 8.4 times the median income. The average house price across the UK is 4.8 times the average income.

- Home ownership overall rose steadily till 2003, then started to decline. Housing assets have been redistributed to older and richer people and to those whose parents were themselves home owners. Together with increasing regional house price differences, this means that more and more people are not just excluded from valuable assets but priced out of access to better jobs.

- The housing crisis is largely due to a lack of housing. The UK’s planning system is the main cause of this. Construction of new homes, especially in higher demand areas, has been decreasing steadily since the 1970s.

- The main constraint on supply is lack of space: Green Belts prevent outward growth, height restrictions stop upward growth. Reform may be politically difficult but there is enough Green Belt land of no environmental or amenity value close to commuter stations in just five city-regions, to build 2 million homes. Coupled with aligning incentives to encourage building this could raise £100 billion of revenues to fund infrastructure and local services.

- Given the constraints on housing supply, the main effect of policies stimulating demand is to increase house prices. In supply-constrained, typically high demand areas, Help-to-Buy actually made housing less affordable. The price increase of newly-built homes outweighed the help to individuals. In these areas house building was static, only profits of registered developers increased.

- Taxation contributes to the problem. Council Tax provides scant incentive for local communities to allow development. Together with the politicised local decision-making in planning, this fuels NIMBYism. Stamp Duty taxes mobility. It discourages downsizing and hampers growing families buying roomier housing.

- A local land tax with annual revaluation and proceeds flowing to local communities would provide incentives for development.
Energy and Climate Change

CEP ELECTION ANALYSIS

Ralf Martin, Petra Sarapatkova and Dennis Verhoeven

November 2019

- UK greenhouse gas (GHG) emissions are declining. The UK has a framework of long-term targets, which aim to reduce net emissions to zero by 2050 in line with what is needed on a global scale to prevent the most severe forms of climate change. There are concerns about the country’s ability to reach the targets.

- A key factor causing lower emissions growth over the last ten years has been the drop in output and slow catch-up that occurred in the wake of the global financial crisis.

- While this was helpful for climate change in the short run, the trend will reverse if growth picks up and this will make emissions reduction harder in the long run, unless concerted action is taken to make the transition towards a clean economy.

- The evolution of UK climate change policy is also in danger from Brexit: while slower growth resulting from leaving the EU may help with emissions in the short run, at the same time reduced investment in pro-environment research and development (R&D) and infrastructure is likely to result in emissions being higher in the long run. With much of UK climate policy derived from EU policy there is also the risk of policy dilution post Brexit.

- To meet the long-term targets, further action is needed to commit more resources to renewable energy deployment as well as R&D.

- Residential energy use should also be tackled by providing the right incentives to move to gas-free options while ensuring that the poorest households are not unduly burdened.
Health and Social Care

CEP ELECTION ANALYSIS

Michael Anderson, Elias Mossialos and Alistair McGuire

November 2019

Summary

• The UK National Health Service (NHS) is acknowledged to have suffered from a funding crisis since 2010.

• The UK currently spends 9.6% of GDP on healthcare (2017 figures), but this percentage is slightly lower than in previous years.

• NHS expenditure is 7.6% of GDP, which is approximately the same as it was in 2012 even though population and treatment pressures have been increasing.

• Historically, the average annual increase in NHS expenditure since it was established has been over 4%, but since 2014/5 average annual NHS expenditure growth has been 1.6% and between 2009/10 and 2014/5 it averaged a mere 1.1% per annum.

• For more than five years, hospital trusts in England have been recording financial deficits.

• As just under 70% of NHS expenditure is spent on the workforce, the low growth in funding has been achieved partly through wage freezes.

• Severe workforce shortages have emerged; currently one in 12 posts are vacant within the English NHS Hospital and Community Services sector.

• This has led to a subsequent deterioration in the quality of service provision with a number of service targets being missed; the cancer treatment target has been missed for the fifth year in a row.

• Social care, which is directly linked to NHS treatment provision, is largely provided by local authorities; adult social care funding fell by around 2% per year between 2010/11 and 2014/15, but has since grown, although it has not recovered to its 2010/11 levels.

• The underfunding of social care, at a time of increasing population pressures has led to issues of bed-blocking within the NHS

• The two major political parties are pledging NHS expenditure growth (3.3% per annum for the Conservatives; 4.3% by Labour), but are less explicit over social care reform.
Policing and Crime
CEP ELECTION ANALYSIS

Tom Kirchmaier
November 2019

- Policing and crime have quickly moved up the list of electoral concerns, with crime being ranked the third most important issue behind Brexit and the NHS in a recent public survey.

- All three main parties have pledged to invest in policing, promising to hire around 20,000 additional police officers. This will be difficult to achieve and is likely to put considerable strain on police forces to deliver on that target.

- If this recruitment occurs, it will end a long period of austerity including budget cuts in policing that has considerably reduced the size of UK forces, hitting forces outside London particularly hard.

- As austerity bit and budget cuts were implemented, violent crime rose in England and Wales after decades of falls. Rising knife crime is particularly prominent.

- If deployed efficiently, there is scope for the additional officers to reduce crime. The effect may vary across places, as larger cities are more difficult to police.

- Consideration needs to be given to the overall operations of the criminal justice system, in particular if and how it would be able to deal with the extra workload generated by additional police officers.
The UK Economy

Anna Valero
John Van Reenen

#GE2019Economists
The UK Economy: Policies for Investment and Productivity Growth

CEP ELECTION ANALYSIS

Anna Valero and John Van Reenen

November 2019

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- Woeful productivity is reflected in pitiful wage growth. Average earnings (after inflation) are about the same level as they were just before the financial crisis – the longest pay stagnation for centuries.

- The positive side of low wages is that there are plenty of jobs: the proportion of prime-age adults with jobs is 76%. Higher than historical peaks of 73% after previous recoveries from recessions. But underlying the strong aggregate performance, there has been a considerable compositional change, with a significant rise in the share of poor quality jobs.

- Boris Johnson’s Brexit deal would be likely to reduce national income per person by more than 6% over the next decade relative to the Liberal Democrats’ policy of remaining in the EU. If Labour were to preside over a soft Brexit, this would reduce rather than eliminate the economic damage.

- One of the reasons for the UK’s longstanding weak productivity is low investment in long-term assets in infrastructure, innovation and skills. Current investment is depressed by uncertainty over the form of Brexit, which will not be resolved until a comprehensive deal with the EU is reached, which will take many years. But the main damage to domestic and overseas investment is due to what will undoubtedly be the negative effects of Brexit on the size of the UK economy. ‘Resolving’ the uncertainty with a hard Brexit will make this loss of investment even worse than it currently is.

- The willingness of the main parties to borrow more to invest is welcome. But public borrowing for current spending is not sustainable, especially in the event of a negative Brexit shock. All parties would need to raise taxes to pay for spending if an inflationary spiral is to be avoided.
Introduction

Since the global financial crisis, the UK has been grappling with persistent poor productivity performance. While a number of factors have been at play, reduced investment due to austerity harmed growth in the early years, and more recently, policy uncertainty surrounding Brexit has held back investment.

While Brexit has dominated UK politics and economic policy since the referendum on EU membership in 2016, the UK government has been developing an industrial strategy in recent years, and has also made a commitment to achieving net zero carbon emissions by 2050. These two elements of policy must be consistent and long-term to enable the UK to meet its commitments, while realising the growth opportunities associated with innovation in the low carbon transition. While institutions around industrial strategy have been strengthened, there is a risk that the volatile political climate could prevent its objectives from being achieved.

UK economic performance since the financial crisis

The most recent estimates of national income growth (GDP) were only 0.3% in the third quarter of 2019. Figure 1 shows the level of productivity (GDP per hour worked) since 1979. Had we followed the three-decade trend prior to the global financial crisis of 2008/09, productivity would have been 24% higher today. This is a truly abysmal performance.

![Figure 1: GDP per hour worked in the UK](image)

Notes: Whole Economy GDP per hour worked, seasonally adjusted. ONS Statistical bulletin, Labour Productivity Q2 2019, release date 8 October 2019 (Q2 2008=100). Note: predicted value after Q2 2008 is the dashed line calculated assuming a historical average growth rate of 2.2%.

Even if we take the average annual growth rate in productivity from 1979 to 2010 (allowing for the immediate aftermath of the financial crisis), and apply this to the level of productivity at the time of the 2010 general election, productivity today would have been 17% higher, representing over £5,000 in GDP per capita.
Although the recovery has been weak across the developed world, UK productivity stands out for being particularly poor by international standards. This has resulted in a widening of the longstanding gap with its main peers. ¹

Moreover, behind the aggregate picture lie significant and persistent regional disparities, which, by some measures, have widened since the financial crisis (see, for example, the CEP’s Atlas of British Industry, Bernick et al, 2018). The CEP Election Analysis on the UK’s economic geography contains detailed discussion on the drivers of these trends (Overman, 2019).

When workers are more productive they get paid more. Figure 2 shows how average real wages also took a hit following the financial crisis and they have still not fully recovered. This stagnation of wages is worse than the Great Depression – one has to go back to the nineteenth century for such periods of poor prolonged real wage growth.

![Figure 2: Average real weekly earnings in the UK](image)

Notes: Average Weekly Earnings, seasonally adjusted regular pay, real terms index, ONS. Release date 12 Nov 2019 (Q2 2008=100).

Given the fact that labour has been cheaper, employment rates have been strong in the post-crisis period, hitting a record high of 76% in early 2019. Figure 3 shows that this is higher than the earlier peaks at the height of booms in the mid-2000s and the late 1980s, when it reached around 73%.

But this aggregate performance hides changes in the composition of the workforce: labour market slack is higher with falling hours and associated increases in under-employment. There has also been an increase in the share of poor quality jobs, often with little employment protection. See the CEP Election Analysis on the UK’s labour market for more discussion (Costa and Machin, 2019).

¹ Recent analysis by the OECD which seeks to produce harmonised measures of hours worked between countries puts the gap in productivity levels between the UK and US at 16.4% (based on 2016 data), see OECD (2018). The gap with Germany is slightly smaller at 14.4%, and with France it is 11.4%. While these gaps are smaller than those in previous estimates, they are substantial. Moreover, the UK’s comparatively weaker performance in recent years implies that gaps have widened over time.
The backdrop to this election is Brexit. The Conservatives have promised to deliver Boris Johnson’s hard Brexit deal, which would mean that GDP would be about 6.4% lower over the next decade or so (CEP and UK in a Changing Europe, 2019). Optimistic estimates put the loss at 3%; pessimists at more than 9% (Dhingra et al, 2017), but there is a consensus that the supply side of the economy will contract significantly due to Brexit. The CEP 2019 Election Analysis on Brexit Economics sets out estimates of the long-run economic impacts of Brexit under different scenarios, and the effects on investment, output and living standards since the Brexit vote (Dhingra and Sampson, 2019).

Notes: Fraction of UK population aged 16-64 in employment, Seasonally Adjusted, ONS (release 12 Nov 2019)
One factor causing the UK’s weak productivity performance since the financial crisis is investment (see Figure 4). Part of the explanation for currently low investment is uncertainty over the form that Brexit will take (Bloom et al, 2018). But it is a mistake to believe that ‘getting Brexit done’ will improve things. First, there will be years of negotiation over what form the UK’s future trading relationship with Europe will actually look like.

Second, a hard Brexit is a certain bad economic outcome compared with remaining in the EU. The UK will be a relatively smaller market with higher trade costs with our closest neighbours, so a less attractive place for investment. In this sense, the Liberal Democrats’ policy of remaining in the EU would produce a double dividend: a ‘Remain bonus’ from reducing uncertainty in the short run and a long-run boost from making the UK a more attractive place than it would be outside the EU.

Austerity contributed to the gradual reduction of the deficit as a share of GDP (see Figure 5). In retrospect, the sharp cuts to public investment in infrastructure in 2010-12 were clearly a mistake given the low interest rate environment and large multipliers (see, for example, Blanchard and Leigh, 2013).

**Figure 5: The public sector deficit as a percentage of GDP**

Notes: UK government debt and deficit, June 2019, ONS. Release 18 October 2019. The dashed line shows the Maastricht deficit to GDP reference value of 3.0% set out in the protocol on the excessive deficit procedure

It is welcome that the main parties are promising increases in spending to finance public investment, so long as such investments are based on solid evidence rather than political gimmicks and ministerial whims. But public spending requires tax increases; otherwise the deficit will be unsustainable, especially in the event of a negative Brexit shock. While debt as a percentage of GDP has fallen in recent years, it is still high by historical standards (see Figure 6).

**Investment for growth**

Investment in fixed capital (including infrastructure) and research and development (R&D) in the UK have been consistently lower than the main comparator countries, and there has also been inadequate investment in skills, in particular at intermediate levels. Figure 7 shows that UK R&D
expenditure has been below its main peers as a share of GDP for some time, and the same pattern applies when considering business or government expenditure on R&D separately.²

Figure 6: Debt as a percentage of GDP

Notes: UK government debt and deficit, June 2019, ONS. Release 18 October 2019. The dashed line shows the Maastricht deficit to GDP reference value of 60% set out in the protocol on the excessive deficit procedure.

Figure 7: Gross R&D as a percentage of GDP

Notes: Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP, OECD MSTI, data extracted 13 Nov 2019.

² Similar analysis using OECD data shows that gross fixed capital formation as a share of GDP is also lower in the UK than in France, Germany and the United States.
Chronic underinvestment in innovation, infrastructure and skills is discussed in the LSE Growth Commission’s 2013 and 2017 reports. Increasing investment in these areas is key to solving the UK’s productivity puzzle, closing the productivity gap with its main comparator countries, and achieving growth that is more inclusive.

This includes improving the performance of lagging regions – where skills and infrastructure in particular are key issues – see the CEP Election Analysis on the UK’s economic geography (Overman, 2019). Investment is also crucial for enabling the UK to meet its commitment to net zero carbon emissions by 2050 and moving the economy onto a sustainable growth path (Rydge et al, 2018).

Increases in both public and private investment are needed, accompanied by a long-term but dynamic industrial policy that will help to prioritise government investment and ‘crowd-in’ private sector investment into the future. Strong institutions, collaboration with businesses, evaluating and adjusting policies based on evidence will all be key for success (Rodrik, 2004), together with co-ordination across areas of government policy.

To achieve this, industrial strategy should be put on an even footing with other areas of economic policy, such as competition, fiscal or monetary policy, so that it can be truly long-term and independent from political cycles. In this context, the establishment of the Industrial Strategy Council – a body made up of a range of key stakeholders from business, policy and research with a remit of developing success metrics and assessing progress – is welcome. But under current structures there is still a real risk that a new business secretary or government could change or cancel promising programmes, as has often happened in the past.

**Final words**

The UK’s poor productivity performance since the financial crisis puts the economy in a fragile position as it deals with prolonged Brexit-induced uncertainty, and faces the potential for a certain negative outcome if a hard Brexit is pursued by the next government.

The UK needs its next government to pursue policies that generate investment for long-run, sustainable and inclusive growth. While the increased public investment being promised by the major political parties is welcome, it must be fully costed, taking account of the negative impacts on public finances that would result from Brexit, and priorities must be set based on evidence of what works.

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3 There is a general lack of robust evidence on the effectiveness of business support policies (see, for example, Roland and Valero, 2015; What Works 2014a, b). More policy experimentation and evaluation is needed, and the BEIS ‘Business Basics programme’ is a good example of this type of initiative, aimed at learning how the performance of the ‘long tail’ of underperforming businesses can be improved.
Further reading


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A series of background briefings on the policy issues in the December 2019 UK General Election

The Labour Market

Rui Costa
Stephen Machin

#GE2019Economists
The Labour Market

CEP ELECTION ANALYSIS

Rui Costa and Stephen Machin

November 2019

Summary

- UK employment growth has been strong in the last few years, reflecting a jobs boom, with employment and unemployment rates respectively at record highs and lows.

- But at the same time, wage growth has been extremely weak with real wages stagnating or falling for most workers since the late 2000s. Low wage workers have done better due to mandated minimum wage increases outpacing inflation.

- The UK's recent wage growth compares poorly internationally. Out of 34 OECD countries, only Greece experienced lower real wage growth between 2007 and 2018.

- The low measured unemployment rate masks that labour market slack is higher than it suggests as average hours have fallen and under-employment has risen.

- Solo self-employment has risen very sharply and is the main source of jobs growth in the UK labour market.

- Insecure employment is on the rise via more low wage positions, including zero hours contracts and new forms of alternative work arrangements (frequently being experienced by the solo self-employed).

- Key policy options for discussion include: proposed sizable increases in minimum wages; the tax and social insurance treatment of the solo self-employed; and the need for productivity to increase to get wages up across the board.
Introduction

The UK labour market, at first glance, seems to be playing at Dr Jekyll and Mr Hyde. Employment (in terms of both levels and rates) is at record highs, yet wage growth has been extraordinarily weak. One view is that these are opposite sides of the same coin. Another, more nuanced standpoint is that record employment is hiding a number of serious concerns about the changing composition of work as poor quality jobs, often with little employment protection, have permeated the labour market.

Employment and unemployment

The employment performance of the UK labour market has been strong, in the wake of the global financial crisis and through the austerity years. Figure 1 plots the employment to population ratio from 1980 to 2019: this shows both a distinct cyclical pattern and, very notably, a rapid pick-up with employment rates growing strongly since 2013.

Indeed, the UK labour market has experienced record high employment since January 2015 when the previous record of 73.2% was superseded. The sustained growth in employment has continued since, reaching a new high of 76% in work (employment or self-employment), according to the latest figures for July-September 2019.

Figure 1: Employment rate in the UK, 1980-2019

The unemployment rate has also come down to record levels. Figure 2 shows the time series, again from 1980 to 2019, with each successive downturn (the early 1980s, the 1990s and the late 2000s/early 2010s) characterised by a lower peak unemployment rate (11.9% in 1984, 10.7% in 1993 and 8.7% in 2011). This has led many commentators to argue that the natural rate of unemployment has fallen and, even more provocatively, that the UK labour market is operating at full employment.
Real wages

On the wage side of the labour market, things are not as rosy. Median real weekly wages have still not returned to the values observed before the start of the recession in 2008. This is shown in Figure 3, which plots median real weekly earnings from 1980 to 2019. In April 2019, the median real weekly wage in the UK was £479. Depending on which price deflator is used to convert the wages to real terms, this is around 1-3% lower than in 2008.

Figure 2: Unemployment rate in the UK, 1980-2019

Source: ONS unemployment series.

Figure 3: Median real weekly earnings, ASHE, 1980 to 2019

Notes: Weekly earnings deflated by CPI or CPIH. Source: New Earnings Survey (NES) and Annual Survey of Hours and Earnings (ASHE). 2019 figures are based on the provisional ASHE estimates published by the ONS in October.
This amounts to a striking turnaround compared with earlier times. It reflects unprecedented weakness in modern history and the extended period of real wage stagnation is the longest since Victorian times (TUC, 2014). What was in broad terms a norm of 2% annual growth in real median wages experienced from 1980 to the mid-2000s is a distant memory. In fact, real wages are a huge 22% below the expected trend if that norm had continued.

The monthly official average weekly earnings (AWE) series pulls out illustrates the recent weakness in wage growth very clearly. With inflation measured using the consumer price index (CPI), Figure 4 shows the systematic 2% real wage growth of the early 2000s and the subsequent departure from that norm.

There have been five phases of real wage growth and decline since the early 2000s:

- Real wage growth of 2%, resulting from around 4% nominal wage growth and 2% price inflation, through most of the period from 2001 to 2008.

- After the onset of the global financial crisis, real wages fell sharply with inflation outstripping AWE nominal growth consistently until September 2014.

- This was followed by period of positive real wage growth anchored on low price inflation.

- The low inflation trajectory suffered a significant shift in the aftermath of the June 2016 referendum on the UK’s membership of the European Union. An overnight fall in the pound of 8% against the dollar has since persisted and intensified. Facing higher import costs, inflation climbed steadily (Breinlich et al, 2019) overtaking AWE growth by February 2017, hence ending the previous phase of real wage growth (Costa et al, 2019).

- As the referendum-induced price increases dropped out of the CPI index, inflation dropped again and, with something of a pick-up in nominal terms, modest real wage growth has returned.

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1 AWE is the headline average weekly earnings index produced by the Office for National Statistics (ONS).
Table 1 shows real wage growth for different groups over the period from 2008 to 2019. Real wages have evolved differently between genders: men have seen a fall in real wages of approximately 7%, whereas women have seen a rise in their real wages of 2% as of April 2019.

Focusing on different points of the wage distribution, the 10th percentile (the worker 10 percent from the bottom of the wage distribution) has experienced real wage growth of 4% in line with the strong real wage growth (12%) of the National Minimum Wage (NMW) and National Living Wage (NLW) rates. By contrast, workers at the median and 90th percentile have suffered real wage falls of 3% and 7% respectively. This shows a modest recent contraction in wage inequality, compared to the long-run upward trend that occurred since 1980 (Machin, 2011).

Table 1: Percentage falls in median real wages since 2008, ASHE

<table>
<thead>
<tr>
<th>Changes in real hourly wages (CPI deflator)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>-3%</td>
</tr>
<tr>
<td>Men</td>
<td>-7%</td>
</tr>
<tr>
<td>Women</td>
<td>+2%</td>
</tr>
<tr>
<td>10th percentile</td>
<td>+4%</td>
</tr>
<tr>
<td>90th percentile</td>
<td>-5%</td>
</tr>
<tr>
<td>NMW/NLW adult rate</td>
<td>+12%</td>
</tr>
</tbody>
</table>

Notes: Using CPI deflator.  
Source: ASHE. 2019 figures are based on the provisional ASHE estimates published by the ONS in October.
Figure 5 places the UK experience into international context by showing real wage growth across developed economies (OECD) between 2007 and 2018. The UK’s performance relative to other countries is extremely poor. With the second worst performance (the worst being Greece), the UK is in the group of four out of thirty four countries that have experienced negative real wage growth during this period (together with Greece, Portugal and Italy).

**Figure 5: International average real wage growth, 2007-18**

Notes: Average real wages defined by the ratio between total wage bill and average hours worked. Source: OECD Stats, 2019 (https://stats.oecd.org/).

The bottom line on real wage growth is that it has been exceptionally weak for most workers. Only those workers benefitting from mandated minimum wage increases have experienced significant real wage growth since the global financial crisis.

**Changes in the nature of work**

The nature of work has changed and that is a key factor behind the strong employment growth seen in the recent past. There are several dimensions: falling hours and associated increases in under-employment; a big rise in solo self-employment; and the emergence of new forms of work and contract types, as typified by the alternative work arrangements of the ‘gig economy’.

Each of these are considered in turn:

**Falling hours**

Full-time weekly hours have dropped, and part-time hours have increased, as shown respectively in the left-hand (full-time) and right-hand (part-time) charts in Figure 6.
Rising under-employment

The percentage of people saying that they would like more hours and of part-time workers who are involuntarily part-time have risen. These changes suggest more slack in the labour market than is picked up in the ILO unemployment rate (see also Blanchflower and Bell, 2019; Boeri et al, 2019). Figure 7 shows higher rates if the under-employed and involuntary part-timers are added, bringing into question claims that the labour market is operating at full employment.

Solo self-employment

One of the most pronounced changes in today’s labour market has been the sizable increase in self-employment. The left-hand chart of Figure 8 shows that around 14% of jobs are now done
by self-employed people, and that all of the increase is in job positions classified as solo self-employment (self-employed people who do not have any employees). According to the latest figures available for 2019, this category alone accounts for 85% of the total number of self-employed workers.

The right-hand chart of Figure 8 shows that many of these are low wage jobs, and that people doing them have suffered much more than employees in terms of real income losses. Between 2007/08 and 2017/18, solo self-employed people have seen the biggest drop in their real weekly income: in the order of 10% in contrast with a total recovery of real income levels for traditional employees and a milder decline of 4% for self-employed people with employees.²

Figure 8: Self-employment rates (left) and weekly incomes (right)

Source: QLFS, ONS.

Alternative work arrangements

Today’s labour market features the use of ‘atypical’ work arrangements. Some of these – such as self-employment and agency work – have emerged in their current format as an evolution of previous work structures. Others – such as short hours and zero hours contracts – reflect the work demands of the modern age, with their introduction driven by technical and social change. The classically cited example is ‘gig economy’ work, but other forms of insecure work have permeated the modern labour market.

The UK labour market now has around 2-2.5% of people working in zero hours contract positions. The left-hand chart in Figure 9 shows the recent trend in the incidence of zero hours contracts. These are employees. Many of these positions are prominent in the low wage sectors of employment (Datta et al, 2019). They are very low paid, as the right-hand chart of Figure 9 makes clear.

Many alternative work arrangements involve the solo self-employed. These are positions that have limited access to the safety net to which traditional employees are entitled: sick pay,

holiday pay, employment security, pensions and coverage by the National Living Wage. Their low pay levels have already been noted. Figure 10 shows that, in addition, the solo self-employed would like to work more than self-employed people who have employees.

Figure 9: Incidence of zero hours contracts and wages

![Graph showing incidence of zero hours contracts and wages](source: QLFS, ONS.)

Figure 10: Desired hours of work among the self-employed

![Graph showing desired hours of work among the self-employed](source: LSE-CEP Survey of Alternative Work Arrangements.)

Notes: The graphs show the distribution of responses to the question ‘Would you have preferred to work more or fewer hours last week at your current wage rate? Or were you satisfied with the number of hours you worked?’ Answers are reported separately for solo self-employed and zero hours contract workers (black bar) and self-employed with employees (grey bar).

Source: LSE-CEP Survey of Alternative Work Arrangements.

Policy issues for the election

The labour market is not in as good shape as some assert. While employment growth has been strong, behind it are some big concerns to do with the changing composition of work and low (sometimes very low) wages. The Resolution Foundation’s (Bell and Gardiner, 2019) argument that people want to work more because they are not earning enough rings true, but many cannot achieve such an aim because extra work is not available.
This should make policy options for the labour market a key election issue. So what is on – or could be on – the table?

**Minimum wages**

Raising the minimum wage has become popular, irrespective of political colour. This is in part because accumulated evidence shows that progressively raising the minimum wage has not caused job losses. It may also be because raising minimum wages is one of the few levers available to governments to boost pay levels directly.

If minimum wage increases continue their prior pattern of not harming employment, then raising the minimum is a good thing to boost the pay of low wage workers. It should be noted, though, that proposed big increases – possibly as far as two thirds of the median wage, as discussed in the recent Dube (2019) report for the Treasury – mean that many more workers would be covered by minimum wages.

Figure 11 shows minimum coverage for hypothetical NLW increases. As coverage increases and so the minimum wage becomes the established rate in more sectors, it is important that career development and promotion are not harmed as would be the case if workers become stuck on the pay floor for longer.

**Figure 11: Minimum wage coverage for hypothetical increases in National Living Wage**

![Figure 11: Minimum wage coverage for hypothetical increases in National Living Wage](image)

*Notes:* Calculation are made following Dube (2019) methodology. The eligible workforce includes those entitled to the NLW (aged 25 and over) and paid below or within 5 pence of the NLW. Results are weighted using the ASHE survey low pay weights. Source: ASHE 2018

**Solo self-employment**

The increased incidence of this kind of work, and alternative work arrangements more generally, has led to discussions of a trade-off between additional flexibility and the emergence
of low wage, dead end jobs that function outside the job legislation offered in conventional forms of employment. These jobs have limited access to the safety net to which traditional employees are entitled: sick pay, holiday pay, employment security, pensions and coverage by the National Living Wage. There are, of course, also different tax treatments of the self-employed that favour employees (for example, those gaining work through agencies) as labelling such workers self-employed.

Policy levers could affect both of these. Tax treatment of the employed and self-employed should be equalised, and already has been discussed at various times in policy circles and government reports (for example, the 2017 Taylor Review).

In addition, the increasingly hazy distinction between who is an employee and who is self-employed (for example, highlighted in the Uber and Pimlico Plumbers court cases) needs to be clarified and addressed, together with whether (and how) social insurance benefits could be extended beyond those in traditional employment to offer a safety net to those in precarious work.

**How to get wages up across the board?**

The billion dollar question. In the long run, the key driver of wages is productivity. For all workers to get pay increases, and for all to have decent living standards, productivity needs to improve. With no return to wage increases from collective bargaining in sight as unionisation rates get lower and lower, this is important.

Employers repeatedly warn of skill shortages, especially outside the South East of England. Research and development (R&D) is low compared with international competitors. Productivity remains sluggish and has taken a hit following the vote to leave the European Union (Bloom et al, 2019). Of course, this speaks to complementary policies that start to go beyond the labour market: skills, innovation and human resources policies are all critical for this goal.

**Further reading**


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Brexit Economics

Swati Dhingra
Thomas Sampson

#GE2019Economists
This briefing summarises CEP forecasts of the long-run effects of leaving the European Union on average incomes in the UK, as well as CEP research on how the Brexit vote has already affected the UK economy.

All forms of Brexit are forecast to make the UK worse off economically than remaining in the EU.

The Conservative Party’s policy is for future UK-EU relations to be based on a free trade agreement. This option is estimated to reduce UK income per capita by up to 6.4%.

Labour’s preferred Brexit policy is hard to pin down, but it is likely to involve closer trade relations with the EU than Conservative policy. A soft Brexit that maintained a customs union with the EU is estimated to reduce UK income per capita by up to 4.9%.

The vote to leave the EU has already reduced UK output, raised the cost of living and led to reductions in real wages and investment.

UK GDP is estimated to be around 2% or £43 billion lower because of the vote to leave the EU.

The depreciation of sterling caused by the referendum result increased consumer prices by around 2.9%, costing the average UK household £870 pounds per year.

Real wages have stagnated since the referendum. Real wage growth has turned negative in sectors that need more imported inputs and are facing increased cost pressures due to the depreciation of sterling.

From an economic perspective, the best policy would be to cancel Brexit. If Brexit goes ahead, policy should focus on prioritising a deep trade deal with the EU, putting services trade, labour and investment high on the negotiating agenda and mitigating the economic impact of Brexit on local areas and workers.
Introduction

Since the UK voted to leave the European Union in June 2016, Brexit has dominated UK politics and economic policy. Three and a half years after the referendum, the UK is yet to leave the EU, there is no certainty over if or when Brexit will take place, and the shape of future UK-EU relations is yet to be determined.

Building on methods from earlier work on international trade, researchers at the Centre for Economic Performance (CEP) started studying Brexit in 2014 (Ottaviano et al, 2014). In this briefing, we summarise the findings of CEP research on the economics of Brexit. We discuss two topics. First, how will Brexit affect the UK economy in the long run? Second, how has the referendum outcome affected the UK economy in the period since June 2016?

Long-run economic consequences

The CEP has developed a state-of-the-art model of international trade to analyse how Brexit will affect UK trade and living standards (Dhingra et al, 2016, 2017a). This model has been used to study how different options for UK-EU trade relations after Brexit would affect the UK economy by analysing how changes in trade barriers affect UK trade, output and income levels in the long run.

Leaving the EU will introduce new costs of trade between the UK and the EU that make it harder for UK firms to do business with the rest of Europe. But the extent to which trade barriers increase will depend on the nature of the post-Brexit relationship that the UK agrees with the EU.

Table 1 summarises the model’s forecasts for four scenarios: (i) soft Brexit – in which the UK remains in the EU’s single market, but not its customs union; (ii) Theresa May’s deal – in which the UK leaves the single market, but maintains a customs union with the EU; (iii) Boris Johnson’s deal – in which the UK leaves the single market and the customs union, and agrees a free trade agreement with the EU similar to the EU-Canada agreement; (iv) hard Brexit – in which future UK-EU relations are based on World Trade Organization (WTO) terms.

<table>
<thead>
<tr>
<th>Change in UK income per capita (relative to remaining in the EU)</th>
<th>Percent</th>
<th>Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Brexit – Norway</td>
<td>-1.6%</td>
<td>-£500</td>
</tr>
<tr>
<td>May’s deal – Customs union</td>
<td>-1.7%</td>
<td>-£500</td>
</tr>
<tr>
<td>Johnson’s deal – Free trade agreement</td>
<td>-2.5%</td>
<td>-£800</td>
</tr>
<tr>
<td>Hard Brexit – WTO</td>
<td>-3.3%</td>
<td>-£1000</td>
</tr>
</tbody>
</table>

Source: CEP calculations. Pound values calculated at 2018 prices using data from the ONS and rounded to the nearest hundred pounds.
In each case, we report the predicted effect of Brexit on UK income per capita ten years after the deal is implemented relative to an alternative scenario in which the UK remains in the EU.\(^1\) A number of important conclusions are immediately apparent.

**The economic consequences of Brexit are negative**

Table 1 shows that in all cases Brexit makes the UK worse off economically than remaining in the EU. Higher trade barriers are costly because they raise the price of imported goods, reduce export opportunities for UK firms and limit the UK’s ability to specialise in industries in which it has a comparative advantage.

The worst-case scenario is a Brexit on WTO terms, which is estimated to reduce income per capita by 3.3%. This is roughly double the cost of either a soft Brexit that keeps the UK in the single market or a deal that maintains a customs union with the EU. The more the UK distances itself from the EU’s economic institutions and policies, the greater will be the increase in trade barriers and the higher will be the costs of Brexit.

The estimates in Table 1 do not account for the effects of Brexit on fiscal transfers between the UK and the EU, or for possible gains to the UK from striking new free trade agreements with countries outside the EU. But even under optimistic assumptions, these effects would be much smaller than the costs shown in Table 1. The UK is a net contributor to the EU budget, but fiscal savings from Brexit are likely to be at most 0.3% of UK income (Dhingra et al, 2017a).

In any Brexit scenario where the UK leaves the EU’s customs union, it would be able to conduct an independent trade policy and seek new free trade agreements with non-EU countries. But the government estimates that such deals would increase UK output by at most 0.2% (HM Government, 2018). And even this may be an optimistic assumption given that smaller countries have less bargaining power in trade negotiations and the EU is a much larger economy than the UK.

**Boris Johnson’s Brexit deal**

The Conservative Party is proposing that future trade relations with the EU should be based on a free trade agreement similar in scope to the EU-Canada deal. This would entail the UK leaving the single market and the customs union, while maintaining tariff-free and quota-free trade with the EU for all (or almost all) products.

Free trade agreements typically take many years to negotiate and it is highly unlikely that a well-designed agreement could be implemented before the December 2020 deadline set by the draft withdrawal agreement. The UK should seek to extend this deadline at the first opportunity.

Leaving the EU’s customs union would require the introduction of customs checks at the UK-EU border. In addition, goods would have to satisfy ‘rules of origin’ requirements to qualify for tariff-free entry, and trade would be subject to the threat of anti-dumping duties and countervailing measures. Likewise, leaving the single market would lead to the introduction of new checks to ensure goods and services exports comply with the EU’s legal standards, and

\(^1\) For a complete description of the CEP trade model and the assumptions made, see Dhingra et al (2017a) for the soft and hard Brexit cases, Levell et al (2018) for May’s deal and Bevington et al (2019) for Johnson’s deal. The numbers reported in Table 1 for the soft and hard Brexit cases differ from those in Dhingra et al (2017a) because Table 1 reports income per capita effects, whereas Dhingra et al (2017a) reports consumption-equivalent welfare effects and also accounts for changes in fiscal transfers from the UK to the EU.
regulatory divergence will further increase trade costs if businesses need to split production lines for different markets.

We estimate that under a Brexit based on Conservative proposals, UK income per capita ten years after the deal was implemented would be 2.5% lower than in an alternative scenario where the UK remains in the EU (Bevington et al, 2019). The costs of Boris Johnson’s Brexit are lower than for a WTO Brexit, but roughly 50% larger than for a soft Brexit or for Theresa May’s deal. This reflects the fact that Johnson’s deal envisions a future in which the UK is less integrated with the EU than under May’s deal.

The draft withdrawal agreement negotiated by Johnson’s government accords Northern Ireland a special status that means it effectively remains in the EU’s single market and customs union. Since Northern Ireland only accounts for around 2% of UK GDP, these arrangements are unlikely to influence how Brexit affects the overall UK economy.

Although Johnson has said there will be no checks on goods moving between Northern Ireland and Britain, the withdrawal agreement will require the introduction of a customs border in the Irish Sea. This will break up the UK’s own single market, impose substantial additional costs on Northern Irish firms in particular and, over time, reduce economic integration between Northern Ireland and the rest of the country.

Labour’s Brexit policy

Labour’s Brexit policy is ambiguous, but involves seeking a soft Brexit that keeps the UK in a customs union with the EU and perhaps also in the single market. Once negotiated the deal would be put to a referendum, though it is unclear whether Labour would campaign for or against its own deal.

To get an idea of the likely economic effects of Labour’s policy, we have analysed two options that maintain relatively high levels of economic integration with the EU. We find that the costs of leaving the single market while remaining in the customs union (May’s deal) are similar to the costs of leaving the customs union while remaining in the single market (the so-called Norway option). Under both alternatives, the UK is better off than under the Conservative Party’s preferred option of a free trade agreement Brexit.

In this sense, Labour’s Brexit policy is preferable to Conservative policy from an economic perspective. But seeking a deal that kept the UK in both the single market and the EU’s customs union would further reduce the costs.

Other parties

The Liberal Democrats, the Scottish National Party, the Green Party and Plaid Cymru advocate cancelling Brexit and remaining in the EU. Since all the Brexit options under consideration would make the UK worse off than if it stays in the EU, remaining is the best policy in terms of Brexit’s effect on average income per capita in the UK.

Regional effects of Brexit

Table 1 shows the economic impact of different Brexit scenarios for the aggregate UK economy. CEP analysis in Dhingra et al (2017b) studies the local effects of the increases in trade barriers associated with Brexit. Predictions of the local economic consequences of Brexit are important for both central and local government in understanding how different regions may be affected by Brexit and in designing appropriate policy responses.
Predictions of the local impact of Brexit are presented in Figure 1 for two different scenarios: soft and hard Brexit. The predictions are computed by combining the sectoral impacts forecast by the CEP’s trade model with local authority level data on variation in employment shares across sectors.

In line with the national estimates, the results predict that all local authorities experience an economic loss under both scenarios, and that losses are bigger in the hard Brexit scenario. On average, economic losses for local authorities, measured as reduced gross value added for the area, stand at 1.14% and 2.12% per annum under the soft and hard scenarios respectively.²

Local economies in the South of England will see bigger losses from Brexit

Figure 1 shows the gross value added impacts by local authority. Areas in the South of England, and urban areas, are predicted to be harder hit by Brexit under both scenarios. Three of the top ten worst hit local authorities are predicted to be in Greater London (City of London, Tower Hamlets and Islington) and nine of the top ten in the South East. Most of these areas have large employment shares in service sector industries such as financial intermediation, which are predicted to experience relatively greater losses.

While the North and the Midlands are estimated to fare less badly after Brexit, the CEP trade model does not build in channels for how areas will adjust in the long run. For example, while London was initially one of the worst hit areas during the 2007-08 global financial crisis, its

² The average local economic effect differs slightly from the national estimate of -1.6% (soft Brexit) and -3.3% (hard Brexit) because it provides changes in local output rather than real expenditures which is the focus of the national estimates.
skill composition and diversified local economy meant it displayed greater resilience and was able to bounce back more quickly.

Finally, areas where the vote to remain in the EU was higher are those that are predicted to be most negatively affected by Brexit, suggesting that areas voted in line with their relative economic interests. That said, it needs to be reiterated that all areas are predicted to face some form of economic loss, and recovery might be more difficult in areas that are poorer to begin with.

**Productivity adjustments would increase the long-run costs of Brexit**

The estimates reported in Table 1 and Figure 1 are calculated using a static trade model that does not allow for any dynamic effects of trade on productivity. Trade integration can raise productivity by promoting efficiency through increased competition, by stimulating innovation and by reducing the cost of intermediate goods.

For an alternative estimate of the economic costs of Brexit, we can draw on the body of empirical evidence on how trade affects income per capita. A central estimate from this work is that a 1% decline in trade reduces income per capita by around 0.5% (Feyrer, 2019). This estimate is designed to capture all channels through which trade affects income, including productivity changes, in addition to the mechanisms embedded in the CEP trade model. It may also partially capture the consequences of changes in foreign investment and immigration that are correlated with changes in trade policy.

Combining this estimate with the changes in UK trade calculated by our model gives the results shown in Table 2. The estimates in Table 2 are around two and a half times as large as the falls in income per capita shown in Table 1, which are obtained directly from the trade model. This suggests that the model does not incorporate all the channels through which trade affects productivity and living standards.

We conclude that although the exact magnitude of changes in income per capita in the four scenarios that we analyse is uncertain, all options are likely to reduce UK living standards and the costs could be substantial.

<table>
<thead>
<tr>
<th>Table 2: Effect of Brexit on UK income per capita with productivity adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in UK income per capita (relative to remaining in the EU)</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Soft Brexit - Norway</td>
</tr>
<tr>
<td>May’s deal – Customs union</td>
</tr>
<tr>
<td>Johnson’s deal – Free trade agreement</td>
</tr>
<tr>
<td>Hard Brexit – WTO</td>
</tr>
</tbody>
</table>

Source: CEP calculations. Pound values calculated at 2018 prices using data from the ONS and rounded to the nearest hundred pounds.
Economic effects of the Brexit vote

The full economic impact of Brexit will not be known for many years. But three and a half years after the referendum, we can assess how the Brexit vote has affected the UK economy since June 2016.

The vote has already had economic effects because economic behaviour depends on what is happening now and on what people and businesses expect to happen in the future. The referendum changed expectations about the future of the UK’s economic relations with the EU and the rest of the world. Not only is Brexit likely to make the UK less open to trade, investment and immigration with the EU, but it has also increased uncertainty.

The Decision Makers’ Panel of firms interviewed by the Bank of England shows that Brexit uncertainty was high after the June 2016 vote. At that time, 38% of firms rated Brexit as one of the three main drivers of uncertainty. This number rose sharply to about 60% of firms after the Salzburg summit in September 2018 when the EU did not accept the UK’s Brexit proposal, which increased the chance of a no-deal Brexit (Bloom et al, 2019).

The immediate economic impact of the Brexit vote was a depreciation of sterling. On the night of the referendum, as it became clear that the UK had voted to leave the EU, sterling suffered its biggest one-day loss since the 1970s. Between 23 and 27 June 2016, sterling declined by 11% against the US dollar and 8% against the euro, and it has stayed at around 10% below its pre-referendum value.

How should we analyse the economic effects of the Brexit vote? A couple of options can be ruled out immediately. It would be a mistake to assume that all changes since June 2016 are due to the referendum outcome. The economy is constantly changing for many reasons that have nothing to do with Brexit. We cannot simply compare today’s outcomes with pre-referendum data and attribute the difference to Brexit. Likewise, it would be wrong to use pre-referendum forecasts that assumed a victory for the campaign to remain in the EU to measure what would have happened.

To overcome these challenges, we can compare the UK’s economic outcomes since the Brexit vote with those of other similar economies that did not vote to leave the EU. We can also examine whether firms or sectors that are more exposed to the effects of Brexit, such as those that do business with the EU, have responded to the vote differently than less exposed parts of the economy. Researchers at CEP and elsewhere have used these approaches to study the effect of the Brexit vote on output, prices, trade, wages and investment.

Output

A broad indicator of economic performance is the growth rate of GDP. Figure 2 shows the UK’s GDP growth from 2012 to 2019. While the UK started with a steeper growth trajectory, it has fallen behind other G7 countries since the referendum. This suggests that the Brexit vote has had a negative effect on the UK’s economic growth.

Born et al (2019) reach a similar conclusion in their research comparing UK growth with a broader control group of countries. They estimate that by the end of 2018, UK GDP was between 1.7 and 2.5 percentage points lower than it would have been if the UK had voted to remain in the EU. In pound terms, this represents a GDP decline of between £1,300 and £2,000 per household.
Figure 2: GDP growth in the UK and other G7 countries, 2012-19

![GDP Growth Chart]

Source: CEP calculations, updated from De Lyon and Dhingra (2019). GDP values are deflated by country-specific GDP deflators. Other G7 countries include France, Germany, Italy, Japan and the United States.

**Prices and the cost of living**

A fall in the pound increases the cost of imports into the UK, which raises the cost of living. Consumer Price Index (CPI) inflation rose dramatically from 0.4% in June 2016 to 3% in January 2018. Breinlich et al (2019a) study whether this increase in inflation was caused by the Brexit depreciation.

If the sterling depreciation is responsible for higher inflation, we would expect product groups where consumers buy more imported goods, such as food and clothing, to have experienced bigger price rises than groups less sensitive to import costs, such as restaurants and hotels. And this is exactly what we find in the data.

Figure 3 shows inflation before and after the referendum for two groups of products: the top half of products and the bottom half in terms of import exposure. Following the referendum there was a rapid increase in inflation for the high import exposure group, while the rise in inflation was much slower for the low import exposure group.

After disentangling the effect of higher import costs from other factors that affect prices, Breinlich et al estimate that the Brexit vote increased consumer prices by 2.9 percentage points in the two years following the referendum. Although the effect of the depreciation on inflation has now died out, its impact on the level of prices is persistent and represents an £870 pound per year increase in the cost of living for the average UK household. It would be wise to view the precise magnitude of this effect with some caution, but the cost is undoubtedly substantial.

Breinlich et al also show that the increase in the cost of living has been evenly shared across households with different income levels. But households in Northern Ireland and Wales have experienced bigger increases in the cost of living due to the Brexit depreciation than the average UK household because they spend more on imported goods.
Figure 3: Import shares and inflation, 2015-18

![Graph showing inflation rates for high and low import exposure groups from January 2015 to January 2018.](image)

Source: CEP calculations based on Breinlich et al (2019a). Inflation for both groups is calculated over the previous twelve months and normalised to zero in June 2016.

**Trade**

By making UK exports cheaper, the depreciation of sterling following the referendum could, in principle, give UK firms a competitive advantage in foreign markets leading to higher exports. But real export growth has not increased since the depreciation, compared with other G7 countries, as Figure 4a shows.

One explanation for the lack of export growth is that the likelihood of future increases in trade barriers between the UK and the EU has made firms reluctant to invest in increasing their export capacity. Crowley et al (2018) find that following the referendum, UK firms were less likely to start exporting to the EU and that existing exporters were more likely to stop exporting. Importantly, they show that these impacts are greater for firms that would face higher tariffs in the event of a no-deal Brexit.

For firms with global supply chains, currency depreciations also raise import costs, mitigating the competitive advantage of the depreciation for exporting (Amiti et al, 2017). The growth in real imports into the UK has been broadly similar to that in other G7 countries, as Figure 4b shows. The nominal value of imports has risen, but this is largely because of a rise in import prices due to the sterling depreciation.

These findings of low real export growth and rising import prices are reaffirmed when comparing sectors of the economy that buy and sell more from countries whose currencies gained more against the pound. Because imports and exports differ in their source and destination countries, sectors trading in different world markets faced a different sterling depreciation.
Comparing sectors that are in the top and bottom 20% of export-weighted depreciations, Figure 5a shows little evidence of any systematic differences in post-referendum responses across sectors in export prices. The same is true for export values or volumes, suggesting that the depreciation has not increased export opportunities for UK businesses (Costa et al, 2019).

The main action turns out to have been on the cost side, due to differences in how much intermediate imports from different countries have been affected by differences in depreciation across countries. Sectors that rely more on imports of intermediate goods and services that businesses use have been badly hit by increased costs from the referendum-induced sterling depreciation. Sectors with higher intermediate import-weighted depreciations saw their intermediate import price index rise by more, as Figure 5b shows.

Overall, the cost side of imports has dominated the potential revenue gains from exports brought by the depreciation. Businesses have absorbed some of the increased costs of imports by lowering worker wages and investment in training, to which we turn next.

Figure 5: Post-pre referendum changes in trade prices by sector depreciations

(a) Export prices (b) Intermediate import prices

Wages and employment

The increase in inflation due to the Brexit depreciation has not been accompanied by faster income growth. As Figure 6 shows, higher inflation has led to a decline in the real value of wages and a fall in living standards. Real wages dropped from a pre-referendum annual growth rate of 1.1% to less than 0.1% after the referendum. Nominal wage growth changed little in the immediate aftermath of the Brexit vote. Over time, however, nominal wage growth in some sectors was affected by the sterling depreciation as cost pressures rose for businesses in sectors that need more intermediate inputs from abroad.

CEP research by Costa et al (2019) sheds more light on the causes of this real wage stagnation. After the referendum, workers in sectors that saw bigger increases in the price of their intermediate imports experienced slower wage growth and reductions in job-related education and training. Comparing sectors in the top and bottom halves of the intermediate import-weighted depreciations, real wages in the top half of sectors were growing at 1.3% annually before the referendum and this dropped to -0.6% after the referendum.

The slowdown is 1.4 percentage points lower than the exposed sectors in the bottom half, which saw a fall in their annual real wage growth from 1% to 0.4% after the referendum. While wages had been growing in the pre-referendum period, real wages have stagnated since then and this effect is more pronounced in sectors that have been hardest hit by rising costs from the sterling depreciation, as Figure 7 shows.

Employment rates continue to be high, although this may be masking the rise in low wage and alternative work arrangements (Costa and Machin, 2019). Rising import costs have not translated into job losses or reductions in hours worked, except paid overtime hours, which have seen reductions since the referendum. Overall, the drop in training opportunities and anaemic wage growth at a time of high employment rates raises serious alarm about a deepening of the productivity slowdown that has plagued the UK economy for years.

**Figure 6: Nominal and real wage growth, 2012-18**

Source: Office for National Statistics. Wage growth is the percentage change year on year in the three month average of Average Weekly Earnings - Regular Pay. Real AWE is Nominal AWE deflated by CPI. The dashed vertical line shows the date of the referendum (June 2016).
Figure 7: Real wage stagnation in sectors with above and below median intermediate import-weighted sterling depreciation, 2012-2018

Source: CEP calculations based on Costa et al (2019). The dashed horizontal lines are the pre and post referendum means for below and above median sector groupings and the dashed vertical line shows the date of the referendum (June 2016).

Investment

Uncertainty makes businesses less willing to invest in risky new projects. Bloom et al (2019) use data from the Bank of England’s Decision Makers Panel to study the firm-level effects of Brexit uncertainty. They find that firms that report experiencing higher Brexit-related uncertainty have had lower investment and productivity growth since the referendum. They estimate that anticipation of Brexit reduced business investment in the UK by 11% in the three years following the referendum. But they cannot tell whether this reduction is primarily due to increased uncertainty or the expectation of a future reduction in openness.

Bloom et al’s findings are consistent with aggregate evidence of weak investment growth since the referendum. In 2018, business investment declined for four consecutive quarters and recorded its lowest annual growth rate since the financial crisis a decade earlier. Investment today increases productivity tomorrow, so declining investment is another worrying sign for future growth prospects.

The Brexit vote has also started to affect investment flows into and out of the UK. Reduced openness makes the UK a less desirable investment destination because it increases the costs of using the UK as a base for serving EU markets. CEP research by Breinlich et al (2019b) shows that the vote to leave led to a 17% increase in new investment projects by UK firms in the EU by March 2019, but did not affect UK investment outside the EU.

Looking at flows in the opposite direction, Breinlich et al find that the referendum reduced new investment projects by EU firms in the UK by 9% over the same period. Together these estimates suggest that Brexit is making the UK a less attractive place to do business.
Final words

There is a broad consensus among economists that leaving the EU will, in the long run, reduce UK living standards (Chadha et al., 2016; Van Reenen, 2016; Sampson, 2017). But the magnitude of the economic costs will depend on what form Brexit takes.

Our analysis finds that Conservative proposals for future UK-EU relations to be based on a free trade agreement would result in around a 50% higher drop in income per capita than a soft Brexit. Remaining in the EU would be the best economic policy, while leaving on WTO terms would be the most costly alternative.

It is too soon to evaluate the accuracy of these forecasts and as time passes, new evidence will continue to provide fresh information on the response of the economy to Brexit. But even before Brexit has happened, evidence on post-referendum trends in output, prices, trade, wages and investment shows that the UK is paying an economic price for its decision to leave the EU.

The economic evidence points to three priority areas for policy action.

First, substantial losses are expected from increased trade barriers with the EU, even if the UK pursues a policy of seeking new trade agreements outside the EU. The best economic policy would be to remain in the EU. But even if Brexit goes ahead, the government should prioritise trade deals with its largest trade and investment partners, which means putting the EU first before looking for deals with the United States or any other countries.

Second, the UK’s comparative advantage is primarily in services. The services sector is already experiencing slower wage growth from the rise in import costs. The importance of minimising barriers to services trade and investment should be a priority in any negotiation. Staying in the single market would maximise market access. No bespoke trade deal, including the EU-Canada trade deal, has been able to deliver the levels of market access available for services through single market membership (Dhingra and Datta, 2017).

Third, the effects of any Brexit deal on local economies need to be closely monitored, as emphasized by the spatial discussions of social mobility and left-behind places in Elliot Major and Machin (2019) and Overman (2019). Immediate losses to local economies could paint a deceptive picture of which places get left behind because recovery from economic shocks depends on the capacity to adapt to change, which is often lower in poorer areas. Fiscal transfers and public support would be necessary for lower income families and regions that are already starting to feel the pain of reduced real earnings and for individuals, especially the young, who are seeing their future earning potential decline as a result of reduced economic activity and fewer opportunities for investments in skills.

Further reading


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Thomas Sampson: t.a.sampson@lse.ac.uk
or Helen Ward: 07970 254872, h.ward1@lse.ac.uk
or Romesh Vaitilingam: romesh@vaitilingam.com
A series of background briefings on the policy issues in the December 2019 UK General Election

Immigration

Jonathan Wadsworth

#GE2019Economists
**Summary**

- Immigration still seems to matter much more politically than it does economically. Immigration’s effects on most areas of the economy appear to be small. There are neither large negative effects nor large positive effects.

- Unlike the UK-born population, a majority of immigrants are in work. Immigrants are also over-represented among the unemployed and economically inactive, and under-represented in the child and pensioner populations. These observations help to explain why, on average, immigrants pay more in taxes than they receive in state benefits relative to others.

- Future immigration policy has to determine who is allowed into the UK, into which sectors of the economy, for how long and at what cost. Given the diverse and changing use of migrant labour in different sectors, this is not, and has never been, a straightforward task.

- Immigration policy and informed debate are compromised further by the current ambiguity over measuring the numbers of immigrants in the UK.
Introduction
Immigration remains a highly contentious issue and its purported effects on the labour market and the wider economy are still highly contested. The discussion in this briefing is intended as a short overview of what we know and what we don’t know about immigration to the UK, its economic effects and the possible direction of future migration policy. A longer version of the briefing discusses many of the points raised in more detail. There are links to the relevant discussion throughout this briefing.

How many immigrants are there in the UK?
Immigration has risen a lot over the last 25 years. Immigrants currently comprise 14.3% of the total UK population, about 9.4 million individuals.

Table 1: Immigrants and the UK population

<table>
<thead>
<tr>
<th></th>
<th>Total (millions)</th>
<th>UK-born (millions)</th>
<th>Immigrant (millions)</th>
<th>EU (millions)</th>
<th>Non-EU (millions)</th>
<th>Immigrant share (%)</th>
<th>EU share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>55.3</td>
<td>52.1</td>
<td>3.2</td>
<td>0.9</td>
<td>2.3</td>
<td>5.8%</td>
<td>1.6%</td>
</tr>
<tr>
<td>1995</td>
<td>57.2</td>
<td>53.3</td>
<td>3.8</td>
<td>1.1</td>
<td>2.7</td>
<td>6.7%</td>
<td>1.9%</td>
</tr>
<tr>
<td>2003</td>
<td>58.7</td>
<td>53.6</td>
<td>5.1</td>
<td>1.3</td>
<td>3.8</td>
<td>8.7%</td>
<td>2.1%</td>
</tr>
<tr>
<td>2017</td>
<td>65.0</td>
<td>55.5</td>
<td>9.5</td>
<td>3.7</td>
<td>5.8</td>
<td>14.6%</td>
<td>5.6%</td>
</tr>
<tr>
<td>2019</td>
<td>65.9</td>
<td>56.5</td>
<td>9.4</td>
<td>3.6</td>
<td>5.8</td>
<td>14.3%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Total (millions)</th>
<th>UK-born (millions)</th>
<th>Immigrant (millions)</th>
<th>EU (millions)</th>
<th>Non-EU (millions)</th>
<th>Immigrant share (%)</th>
<th>EU share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>33.6</td>
<td>31.2</td>
<td>2.5</td>
<td>0.7</td>
<td>1.8</td>
<td>7.3%</td>
<td>2.2%</td>
</tr>
<tr>
<td>1995</td>
<td>36.4</td>
<td>33.4</td>
<td>3.0</td>
<td>0.8</td>
<td>2.2</td>
<td>8.2%</td>
<td>2.0%</td>
</tr>
<tr>
<td>2003</td>
<td>38.0</td>
<td>34.0</td>
<td>4.0</td>
<td>0.9</td>
<td>3.1</td>
<td>10.5%</td>
<td>2.3%</td>
</tr>
<tr>
<td>2017</td>
<td>41.1</td>
<td>33.4</td>
<td>7.7</td>
<td>3.0</td>
<td>4.8</td>
<td>18.5%</td>
<td>7.2%</td>
</tr>
<tr>
<td>2019</td>
<td>41.3</td>
<td>33.7</td>
<td>7.6</td>
<td>2.9</td>
<td>4.7</td>
<td>18.4%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

Source: Author analysis of Labour Force Survey (LFS); working age population is 16-64.
Measuring immigration

Knowing the number of immigrants living in the UK is something of an inexact science. There is no official count of the number of resident immigrants, nor of inflows and outflows, despite net inflows being a longstanding government target until recently.

Instead, different household surveys are used to estimate the numbers. The International Passenger Survey (IPS) and its companion, Long Term International Migration (LTIM), have recently been downgraded to ‘experimental’ status by the Office for National Statistics (ONS) because of concerns about its coverage and weighting (see ONS, 2019). The Labour Force Survey/Annual Population Survey (LFS/APS) is the only official data set that can provide a regular, timely estimate of the total number of immigrants living in the UK (not just the yearly flows in and out).

Currently, the various data sources conflict. The LFS (Figure 1) indicates that the immigrant population has been static, and may have even fallen a little, since 2017. In contrast, the IPS says that net inflows (inflows minus outflows) of immigrants to the UK have been consistently positive, in the order of 250,000 a year (see Figure 2). Both data sources use different definitions of immigrants. But policy formulation and informed debate about immigration are currently compromised by the ambiguity in the data.
Figure 1: LFS quarterly estimates of the immigrant population

Source: LFS; author calculations.

Figure 2: IPS/LTIM quarterly estimates of yearly changes in the immigrant population

Source: LTIM (2019); author calculations.
Immigration and the regions

The regional distribution of immigrants is far from even. Figure 3 shows that 36% of London’s population were born abroad but in North East England, 5% of the population are immigrants. The regions with most immigrants in 2019 were also the regions with the most immigrants in 1995. Indeed, the high immigrant regions in 1995 have experienced the largest increases in immigration since 1995.

**Figure 3: The regional distribution of immigration, 1995-2019**

![Diagram showing the regional distribution of immigration, 1995-2019.]

**Source:** author analysis of LFS.

Where do immigrants work?

Immigrants are concentrated in certain sectors and occupations of the economy. In some sectors, notably food manufacture and domestic service (cleaners), immigrants comprise more than a third of the workforce. In contrast, immigrants working in the fishing and water supply industries comprise less than 5% of the workforce.
<table>
<thead>
<tr>
<th>Largest immigrant sectors</th>
<th>Total employment</th>
<th>Percentage of sector who are immigrants</th>
<th>Percentage of sector who are EU immigrants</th>
<th>Average hourly wages</th>
<th>Hiring rate</th>
<th>Percentage of hires from the EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food manufacture</td>
<td>310,000</td>
<td>36%</td>
<td>23%</td>
<td>£9.80</td>
<td>15%</td>
<td>26%</td>
</tr>
<tr>
<td>Domestic service</td>
<td>40,000</td>
<td>36%</td>
<td>15%</td>
<td>£10.50</td>
<td>13%</td>
<td>24%</td>
</tr>
<tr>
<td>Warehousing</td>
<td>390,000</td>
<td>32%</td>
<td>20%</td>
<td>£10.70</td>
<td>20%</td>
<td>23%</td>
</tr>
<tr>
<td>Textiles</td>
<td>50,000</td>
<td>31%</td>
<td>20%</td>
<td>£10.00</td>
<td>16%</td>
<td>12%</td>
</tr>
<tr>
<td>Hotels</td>
<td>350,000</td>
<td>29%</td>
<td>17%</td>
<td>£8.40</td>
<td>24%</td>
<td>15%</td>
</tr>
<tr>
<td>Security</td>
<td>190,000</td>
<td>28%</td>
<td>6%</td>
<td>£10.10</td>
<td>19%</td>
<td>8%</td>
</tr>
<tr>
<td>Scientific</td>
<td>150,000</td>
<td>28%</td>
<td>17%</td>
<td>£18.70</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Computing</td>
<td>710,000</td>
<td>27%</td>
<td>8%</td>
<td>£22.00</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>Smallest immigrant sectors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal manufacture</td>
<td>80,000</td>
<td>7%</td>
<td>3%</td>
<td>£13.20</td>
<td>13%</td>
<td>6%</td>
</tr>
<tr>
<td>Drinks manufacture</td>
<td>60,000</td>
<td>7%</td>
<td>4%</td>
<td>£14.50</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Fishing</td>
<td>20,000</td>
<td>5%</td>
<td>4%</td>
<td>£11.50</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td>Water supply</td>
<td>80,000</td>
<td>2%</td>
<td>1%</td>
<td>£15.20</td>
<td>11%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>UK</strong></td>
<td>32,600,000</td>
<td>18%</td>
<td>7%</td>
<td>£12.30</td>
<td>15%</td>
<td>9%</td>
</tr>
</tbody>
</table>

*Source:* LFS four-quarter average ending 2019q2. Note: Sectors based on two-digit SIC 2007; hiring rate is approximated by the percentage of the workforce in employment for less than one year; average wage is median hourly wage.

Many of the occupations that employ a large fraction of immigrants are less skilled. Again there are exceptions. Many immigrants work as scientific and health professionals (EU
migrants are over-represented among scientists but less so among health professionals). In contrast, government administration makes little use of immigrant labour.

Table 4: The occupational distribution of EU immigrants, 2019

<table>
<thead>
<tr>
<th>Largest immigrant workforce share</th>
<th>Total</th>
<th>Percentage of sector who are immigrants</th>
<th>Percentage of sector who are EU immigrants</th>
<th>Percentage of UK-born in sector who are graduates</th>
<th>Percentage of EU in sector who are graduates</th>
<th>Hiring rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packers</td>
<td>260,000</td>
<td>43%</td>
<td>28%</td>
<td>4%</td>
<td>20%</td>
<td>22%</td>
</tr>
<tr>
<td>Cleaner managers</td>
<td>80,000</td>
<td>39%</td>
<td>30%</td>
<td>3%</td>
<td>35%</td>
<td>12%</td>
</tr>
<tr>
<td>Food process</td>
<td>230,000</td>
<td>36%</td>
<td>25%</td>
<td>6%</td>
<td>27%</td>
<td>17%</td>
</tr>
<tr>
<td>Chefs and cooks</td>
<td>460,000</td>
<td>33%</td>
<td>13%</td>
<td>7%</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td>Textiles</td>
<td>50,000</td>
<td>33%</td>
<td>16%</td>
<td>11%</td>
<td>23%</td>
<td>12%</td>
</tr>
<tr>
<td>Cleaners</td>
<td>740,000</td>
<td>31%</td>
<td>17%</td>
<td>2%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Scientists</td>
<td>220,000</td>
<td>29%</td>
<td>16%</td>
<td>74%</td>
<td>91%</td>
<td>15%</td>
</tr>
<tr>
<td>Storage</td>
<td>460,000</td>
<td>28%</td>
<td>19%</td>
<td>4%</td>
<td>33%</td>
<td>22%</td>
</tr>
<tr>
<td>Health professionals</td>
<td>560,000</td>
<td>28%</td>
<td>9%</td>
<td>82%</td>
<td>82%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Smallest immigrant workforce

<table>
<thead>
<tr>
<th>Total</th>
<th>Percentage of sector who are immigrants</th>
<th>Percentage of sector who are EU immigrants</th>
<th>Percentage of UK-born in sector who are graduates</th>
<th>Percentage of EU in sector who are graduates</th>
<th>Hiring rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government administration</td>
<td>340,000</td>
<td>7%</td>
<td>2%</td>
<td>24%</td>
<td>33%</td>
</tr>
<tr>
<td>Farm managers</td>
<td>40,000</td>
<td>6%</td>
<td>1%</td>
<td>25%</td>
<td>1%</td>
</tr>
<tr>
<td>Senior protection</td>
<td>60,000</td>
<td>6%</td>
<td>2%</td>
<td>25%</td>
<td>38%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>390,000</td>
<td>4%</td>
<td>2%</td>
<td>12%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Source: LFS, four quarter pooled 2018q2-2019q2; classifications based on three-digit SOC 2010 codes averaged over four quarters; a graduate is defined as having left full-time education aged 21 and over.
**Immigrant pay**

The pay of immigrants and the UK-born reflects the occupation and sector distributions of each group and the history of entry regulations for each group.

**Different sector needs**

Not only is there wide variation in the proportion of immigrants employed in different sectors, but there are also differences in how this has changed over time. The experience of occupations with respect to the employment of immigrants and the UK-born is diverse, reflecting differing sector needs and ways of working.

Along the green line in Figure 4, there is equal growth in the numbers of immigrants and UK-born (for example, nursing). The red line shows equal and opposite growth – so that chefs are a stable occupation only because a rise in the number of immigrant chefs is just offsetting the fall in the number of UK-born chefs. To the right of the green line, the number of UK-born workers in the occupation has grown faster than the number of immigrants (for example, IT hired more UK-born workers than immigrants).

Between the red and green lines (plumbing, for example), immigrant numbers have grown faster than the number of UK-born employees. To the left of the red line, occupations are declining – some, like sales, with growing immigrant numbers more than offset by falling UK-born. Others, like government administration, are in decline with falling numbers of both groups.
Figure 4: Changes in immigrant and UK-born employment by occupation, 2011-2019

Source APS; author calculations.
The labour market effects of immigration

The essential point about immigration’s effects on the labour market prospects of UK-born workers can be summarised by the following two figures, which are intended to summarise the findings of the detailed academic studies that have preceded them.

The graphs plot changes in wages or employment of the UK-born against changes in immigration across regions since the end of the last recession. The solid line summarises the relationship between changes in immigration to the area and changes in the employment and wage rates of UK-born individuals in that area over the period from 2011 to 2019. If immigration reduced employment or wage prospects, we would expect a strong downward sloping line: more immigrants would mean fewer jobs and/or lower wages for local workers.

It is clear from the graphs that there is little relationship between immigration and the employment or wage rates of those born in the UK. Immigration is not associated with either deteriorating or improving job prospects for UK-born workers, on average, (the longer version of this briefing shows similar graphs for less skilled UK-born workers).

Figure 5: Changes in immigration and the employment of UK-born residents, 2011-2019

Source LFS (four quarters of each year); author calculations.
Figure 6: Changes in immigration and wages of UK-born residents, 2011-2019

Immigration and public services

It is sometimes suggested that immigration could compromise public services by increasing demand and competition for publicly provided resources. Unlike the UK-born population, a majority of immigrants are in employment and so are over-represented among the total number in work. Immigrants are also over-represented in the unemployed and economically inactive populations, and under-represented among children and pensionable age populations. Immigrants are younger and therefore more likely to be healthier. They are also more highly qualified on average than the UK population, and more likely to be in (higher paid) work than the average UK-born individual.

All this underlies the reason why several studies, summarised by the Migration Advisory Committee (MAC, 2018) find that immigrants are net fiscal contributors, paying more in taxes than they receive in benefits and, as such, are less likely to put pressure on public services like the NHS or schools. The size of these positive contributions is, however, small (MAC, 2018).
Table 2: Immigrants by activity status, 2019

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Employed</th>
<th>Unemployed</th>
<th>Inactive</th>
<th>Student</th>
<th>Child under 16</th>
<th>Pension age</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total (millions)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK-born</td>
<td>56.5</td>
<td>24.9</td>
<td>0.9</td>
<td>5.3</td>
<td>2.6</td>
<td>11.9</td>
<td>10.9</td>
</tr>
<tr>
<td>Immigrant</td>
<td>9.4</td>
<td>5.5</td>
<td>0.3</td>
<td>1.2</td>
<td>0.6</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td>of which</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>3.6</td>
<td>2.3</td>
<td>0.1</td>
<td>0.3</td>
<td>0.2</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Non-EU</td>
<td>5.8</td>
<td>3.2</td>
<td>0.2</td>
<td>0.9</td>
<td>0.4</td>
<td>0.4</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>As percentage of total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK-born</td>
<td>100%</td>
<td>43.8%</td>
<td>1.7%</td>
<td>9.6%</td>
<td>4.6%</td>
<td>21.1%</td>
<td>19.2%</td>
</tr>
<tr>
<td>Immigrant</td>
<td>100%</td>
<td>58.9%</td>
<td>2.7%</td>
<td>13.2%</td>
<td>6.1%</td>
<td>8.0%</td>
<td>11.0%</td>
</tr>
<tr>
<td>of which</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>100%</td>
<td>65.2%</td>
<td>2.0%</td>
<td>8.0%</td>
<td>5.2%</td>
<td>9.9%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Non-EU</td>
<td>100%</td>
<td>55.0%</td>
<td>3.2%</td>
<td>16.6%</td>
<td>6.7%</td>
<td>6.8%</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

Source: author analysis of LFS; working age population is 16-64.

Immigration policy options

Immigration to the UK contains three distinct groups: workers and their families; students; and refugees. All three groups are covered by different rules and visa schemes. Future policy has to balance the costs and benefits of changing the rules for each area. A new government has to decide essentially who gets in, for how long and at what cost among the many disparate groups of potential immigrants. This is not an easy task.

The policy options offered by the different political parties in this election vary from retaining the existing system to a points-based system that shows no favour for EU migrants over non-EU migrants. The various issues and policy possibilities are discussed further in the long version of this briefing.

The immediate consequences of Brexit, if it happens, may be very different from what governments may want from a long-term immigration strategy. Policy may have to be designed flexibly to address the resulting short-term versus long-term issues.
With regard to the labour market, firms with labour shortages can train more, automate more, change work practices (such as pay or working conditions) or move instead of using labour from abroad. Indeed, it may well be that the change in direction of EU immigration flows following Brexit has already forced some adjustment by firms, so the immediate migration response of increased outflows and a fall in inflows after the vote has forced firms to address the new reality without there being any change in policy.

If not, sector-specific and time-limited or seasonal migration schemes (from the EU or elsewhere) could allow workers into the less skilled sectors until businesses had adapted to the new policy environment. The downside of such a policy is that sectors may postpone any changes to their business model.

Any quotas or work visas for EU nationals after Brexit are also likely to favour graduate sector jobs. This is partly because the existing immigration policy for non-EU citizens is almost exclusively restricted to graduate-level jobs and partly because the net fiscal contribution from graduates is likely to be higher than from non-graduate jobs. Whether there are more shortages in this area or in the vocational sector due to the UK’s relatively poor training record (OECD, 2017) is open to discussion. It may be that a revised shortage list could be broadened, again, to include the type of shortage vocational jobs that were originally on the list.

Immigration could also be targeted at individuals rather than jobs, effectively reverting to a points-based system, a form of which was in place in the UK in the late 2000s but subsequently dropped by the coalition government of 2010-2015. Coming up with a coherent points system is not an easy thing to do. Targeting individual graduates may not help graduate sectors if the graduates migrate to less skilled occupations (as suggested by Table 4).

Occupation-based entry shortage schemes rather than individual points-based entry have the advantage that labour market signals can better determine which sectors are in shortage. Letting firms and workers interact within informed general government imposed guidelines (such as restricting entry to graduate or higher paying jobs) is probably a better way to get good job matches. Restricting by occupation rather than people will probably reduce migration flows more, since the set of eligible occupations is easier to restrict than a set of eligible individuals.
Limiting immigration to those with job offers in certain occupations does not, however, automatically restrict migration to these sectors. Students can work in the UK before and after graduation. Non-EEA family migrants can work in any sector in the UK. Firms can bring in employees from international subsidiaries in occupations not on a shortage list (inter-company transfers). Workers can leave jobs for other sectors.

There are also issues of regional or, more likely, country-specific immigration schemes to consider. Scotland has some additional leeway over its work route since it has its own shortage occupation list. Country/regional-based schemes are easier to operate with temporary visas. With permanent residence, individuals can move away from the area that sought to attract migrants, which can then negate the effect of the policy to attract migrants.

But temporary visas bring other problems in the form of monopsony issues. If individuals are tied to a particular employer, this gives the employer more power over a worker than if the worker were free to choose where to work. Temporary visas increase the likelihood that some individuals may overstay the length of their visa.

The Immigration Skills Charge on any firm hiring labour from outside the EU has been in place since 2017. It is too early to tell whether this has deterred some firms from hiring, but knowledge of this policy and its effects would be welcome in helping decide whether and how to extend to hiring workers from the EU.

**Conclusions**

Immigration still seems to matter much more politically than it does economically. All the empirical work that has been done on UK immigration shows very small labour market effects, either positive or negative. Any reduction in EU immigration would have a small negative impact on the public finances since EU migrants pay more in taxes than they receive in benefits and public services (whereas UK-born and non-EU migrants receive more in benefits than they pay in taxes), but these net payments are not very big.

The options for future immigration policy are many and varied and there are no easy answers as to what to do or what to prioritise. It may well be that immigration policy, like so many policies in the UK, evolves and reacts to events and the unforeseen consequences of previous actions. As such, this makes it hard to design a new migration system.
Further reading

For a more in-depth analysis please click here:  
http://cep.lse.ac.uk/pubs/download/ea052_in_depth.pdf


Langella M, and A Manning (2016) ‘Who voted Leave: the characteristics of individuals mattered, but so did those of local areas’, LSE Blog (http://eprints.lse.ac.uk/71596/1/blogs.lse.ac.uk-Who%20voted%20Leave%20the%20characteristics%20of%20individuals%20mattered%20but%20so%20did%20those%20of%20local%20areas.pdf).


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A series of background briefings on the policy issues in the December 2019 UK General Election

Social mobility

Lee Elliot Major
Stephen Machin

#GE2019Economists
Social Mobility

CEP ELECTION ANALYSIS

Lee Elliot Major and Stephen Machin

November 2019

Summary

- Britain, alongside the United States, has lower intergenerational income mobility than other developed countries.

- There is a strong link between a country’s level of income inequality and intergenerational immobility. When the rungs of the income ladder are wider apart, the chances of climbing the ladder are lower.

- Britain’s low relative social mobility arises in particular from ‘stickiness’ among the richest and poorest in society.

- Real wage stagnation has resulted in falling absolute social mobility with many people’s living standards being no better than their parents were in the previous generation. Younger people have been hit even harder in terms of drops in intergenerational home ownership mobility.

- There are substantial differences in social mobility at the local level: where you grow up makes a difference to how much your family background affects your life chances.

- Low social mobility is driven by education inequalities and work inequalities. The former reflect an ever-escalating educational ‘arms race’; the latter that individuals from wealthy backgrounds now accrue a higher earnings return in the labour market from their higher qualifications. Similarly, the pay premium from attending private school has risen. At the same time, the kind of jobs available in the labour market is rapidly changing.

- These intergenerational patterns have been one factor behind economic, social and political fractures affecting individuals and communities. The clearest example is the very strong spatial correlation between low social mobility and voting to leave the European Union.

- Small tinkering and minor tweaks of existing policies will simply not be enough to tackle Britain’s social mobility problem. More radical reforms are needed underpinned by four underlying principles: collectivism; fairness; community; and decency. It is entirely possible to create a collective community-based culture, a fairer education system, a stronger economy and a more equal society that would boost social mobility.
Introduction

Debates over how to improve life prospects for people irrespective of their family background promise to be a key theme in the run-up to the 2019 General Election. This briefing summarises evidence on social mobility from the Centre for Economic Performance (CEP) at LSE, drawing in particular on the Elliot Major and Machin (2018) Penguin book *Social Mobility and Its Enemies* and, where relevant, using updated data.

Social mobility tells us how likely we are to climb up (or fall down) the economic or social ladder of life. Much of the research by economists focuses on earnings, income or education mobility – measuring the cross-generation link between these outcomes for parents and their offspring. A huge body of work by sociologists has studied social class connections across generations, and social science researchers have considered many other outcomes, including health, wellbeing, criminality and more.

This evidence base highlights the different challenges of social mobility: enabling talent irrespective of background to get to the top of society (however defined) but also encouraging people to live fulfilling lives in their local communities. Improving social mobility is about enabling children and young people to fulfil their potential and to make their own informed choices as to what they want to achieve irrespective of their background. It is then down to their individual talents and hard work to progress in the direction they have chosen. Social justice and social mobility are two sides of the same coin.

Existing and emerging evidence suggest that this is an increasingly urgent issue: social mobility in Britain is low, and many people growing up today are facing declining absolute mobility and lower living standards.

Low mobility

The Great Gatsby curve in Figure 1 documents intergenerational earnings elasticities for a range of countries. These measure levels of income immobility. The higher up the graph, the less mobile is a country. The figure shows that Britain, alongside the United States, has lower income mobility than other developed countries.

The curve is named after the novel *The Great Gatsby*, drawing parallels with the levels of inequality witnessed a century ago in the roaring twenties in America. It is so named as it displays a strong link between countries’ levels of income inequality, measured by the Gini coefficient, and their levels of income immobility. More unequal societies are more rigid. When the rungs of the income ladder are wider apart, the chances of climbing the ladder are lower.

Political debates over whether to aim for equality of outcome rather than equality of opportunity are a false dichotomy. We need to address both high inequality and low social mobility, and associated social justice issues. Moreover, it is also not just earnings but total wealth – including financial investments and housing – that sets the elite apart from the rest of us.
Sticky ends

Britain’s low intergenerational income mobility is driven by ‘stickiness’ among the richest and poorest in society, namely those at the top and bottom ends of the income distribution. In the seminal CEP study of Blanden et al (2004), analysis of cohort data on all individuals born in a week of March 1958 compared with those born in April 1970 showed a striking decline in economic mobility.

A quarter of sons born in 1958 from the poorest 20% of families remained in the poorest 20% themselves as adults, while 32% of those born into the richest 20% stayed among the richest when they grew up. However, over a third (35%) of sons born in 1970 from the poorest fifth remained within the poorest income group as adults and 41% of those born into the richest fifth stayed among the richest as adults. In just over a decade, one in which inequality rose very sharply as the two cohorts entered the labour market, Britain had become less mobile in relative terms.

Falling absolute mobility

Real wage stagnation resulted in falling absolute social mobility as workers did not experience the real wage gains that their parents did. Recently, most workers’ wages have declined in real terms: for example, in the decade from 2008, the median worker’s wages decreased by 3% in real terms (Costa and Machin, 2019), with male workers and the young doing worse.

They are therefore worse off than their counterparts in the labour market were earlier, and we are now in a situation where more people’s living standards are no better than their parents were in their own generation. Current generations are also more likely to face the experience of downward mobility, and so face the double whammy of low relative mobility and falling absolute mobility.

Falling absolute mobility at age 30 is shown in Figure 2. It charts the proportion of children who go onto earn more than (or as much as) their fathers did for successive generations. Well over half of children born in 1975 exceeded or equalled their fathers’ earnings in real terms at the age

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Figure 1: The Great Gatsby curve

![The Great Gatsby curve](image)

Source: Elliot Major and Machin (2018)
of 30. But only a third of children born in 1985 did so. The dream of just doing better, let alone climbing the social ladder, is disappearing.

**Figure 2: Absolute intergenerational mobility**

![Absolute Intergenerational Mobility](image1)

Source: Blanden et al (2019)

This pattern of low relative mobility and falling absolute mobility among younger people in Britain is reflected even more extremely in the case of housing. Figure 3 shows evidence on intergenerational patterns of home ownership, again from the 1958 and 1970 birth cohort data, this time at age 42 in 2000 and 2012 respectively.

The figure clearly shows that those who grew up in owner occupancy are more likely to become owner-occupiers themselves. But this connection grows strongly over time and is much stronger for the 1970 cohort in 2012. In fact, while there is a 8 percentage point fall from 88% to 80% of 42 year olds who own their home if their parents did, there is a disproportionate, more than twice as big at 15 percentage points, fall in home ownership among 42 year olds whose parents did not own their own home when they were growing up.

Thus the generational divide in the housing market has worsened significantly as intergenerational home ownership mobility fell.

**Figure 3: Intergenerational patterns of home ownership**

![Intergenerational Home Ownership Patterns](image2)

Source: Blanden and Machin (2017)
**Education and work inequalities**

Low social mobility is driven by education inequalities and work inequalities. The former reflect an ever-escalating educational ‘arms race’; the latter the fact that individuals from wealthy backgrounds accrue a higher earnings return in the labour market from their higher qualifications, and that the kind of jobs available in the labour market is changing. Existing inequalities are therefore transmitted and magnified across the generations.

Around 50% of “leading” people across a range of professions attended private schools, despite comprising only 7% of the school population. These proportions have stayed constant for several decades. Moreover, there is an increasing pay premium from studying at private school. In 1991, privately educated 33-34-year-olds were earning 25% more than their state-educated counterparts. In 2004, the pay premium had increased to 41%.

The biggest losers in this race are the thousands of school leavers without basic literacy and numeracy. A quarter of adults in England do not have basic functional skills. This extrapolates to around 10 million unskilled adults across Britain. The trend for Britain contrasts with increasingly skilled populations in other countries.

As Figure 4 shows, the graduation gap between rich and poor nearly trebled between 1981 and 2013. Despite substantial growth in the number of people doing degrees, the graduation rate for those from the poorest families in 2013 (18%) had still to exceed the rate for those from the richest families in 1981 (20%).

![Figure 4: Changes in educational inequality](image)

Source: Elliot Major and Machin (2018)

A major challenge for social mobility is inequality in work, both from earnings and employment. There is a growing wage premium for graduates compared with people without degrees. Numbers reported in Elliot Major and Machin (2018) show that in 1980, male graduates earned, on average, 46% more than their non-graduate counterparts. In 2017, this earnings uplift was 66%.

This reflects a more general trend in rising wage inequality. Figure 5 shows the 90-10 wage differential – the ratio of wages for someone 10% from the top of the wage distribution at a given
point in time to someone 10% from the bottom – between 1980 and 2017. Back in 1980, this ratio was 2.7; by 2019 it had risen to nearly 3.8.

**Figure 5: Rising wage inequality**

90-10 Wage Differentials, 1980 to 2019

![Graph showing rising wage inequality from 1980 to 2019](image)

Source: Elliot Major and Machin (2018)

Recent changes in the composition of jobs have also produced new issues. Britain’s booming gig economy has created millions of jobs often done by the solo self-employed, sometimes with zero hours contracts, and lacking security, progression or rights (Datta et al., 2019). Work practices in some of the Ubers, Sports Directs and Deliveroos of the world are not unreminiscent of the work conditions in Victorian times, as a new informality has come to the labour market in Britain.

**Place-based differences in social mobility**

Where you are born in Britain matters as much as who you are born to. Education cold spots litter the country from the Midlands to the North of England, including coastal towns, former industrial centres and rural constituencies, brutalised by ineffective education, deprivation and unemployment over successive generations.

Politicians so far have failed to deliver convincing responses to the loss of working communities disrupted and destroyed as economic activity has globalised and negative economic shocks have had a cumulative impact that has fractured local communities.

Research in the United States by Chetty et al (2014) finds several factors correlate with low social mobility: high income inequality, high social segregation in housing, less social connectivity in communities, fewer two-parent families, and poorly performing schools.

The same is true in England and Wales. Figure 6 is a heat map (red showing more social mobility, white showing less) depicting substantial spatial differences in social mobility (from Bell et al, 2019) across 35 NUTS2 areas of England and Wales in 2011.
Figure 6: Local differences in social mobility, England and Wales (Upward occupational mobility for the 1974-83 birth cohort at ages 28-37 in 2011)

Source: Bell et al (2019) based on analysis of ONS LS. This work contains statistical data from ONS which is Crown Copyright. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.

Economic, social and political fractures

Intergenerational patterns (in levels and changes) have been one factor behind economic, social and political fractures that have had a cumulative effect on individuals and communities. The clearest example is the very strong correlation between low social mobility and voting to leave the European Union. This is shown in Figure 7 at local authority level in England. Those with little chance of moving up the ladder were much more likely to vote leave.

Figure 7: Social mobility and Brexit

Source: Elliot Major and Machin (2018)
Realistic aims for social mobility

A realistic, if ambitious, aim for Britain would be to increase social mobility to levels like those in countries with cultural, historical and economic similarities. For example, by lowering the intergenerational elasticity shown in Figure 1 to be more like Australia or Canada.

Greater social mobility would mean less talent unfulfilled, more representative elites and a boost to the national economy. For example, if levels in Britain were improved to those in Canada, it has been estimated that this would lead to an annual increase in the country’s GDP of around 4.4% (Elliot Major and Machin, 2018). To put this figure into context, a 4% loss in GDP would be suffered in a major recession.

Four principles to improve social mobility

Small tinkering and minor tweaks of existing policies will not be enough to tackle Britain’s social mobility problem. The evidence suggests more radical reforms are needed underpinned by four underlying principles. We will discuss four principles in detail in the new book we are currently writing (Elliot Major and Machin, 2020). A brief overview is given here:

Collectivism – from me culture to we culture

Social mobility is lower in countries like Britain and the United States that have embraced the American dream – an individualistic notion of success. Social mobility is higher in the Scandinavian countries that promote a more collective mindset. Policies enabling better conditions for social mobility would level the playing field for all while enabling individual talents to flourish.

This might mean private schools working in genuine partnerships with state schools to earn tax relief, a national service for university students to tutor disadvantaged children, and improved pay for those who do valuable public service jobs – nurses, teachers, social workers, carers. It also means progressive taxation: closing the tax loopholes that allow the wealthy to entrench their privilege, and increasing inheritance tax.

Fairness – levelling up an uneven playing field

Admissions to schools and universities are tilted in countless ways to the already advantaged. Significant numbers of parents admit to cheating to get their children into the most desirable schools – renting houses nearby, for example. The fairest way to allocate places to equally deserving candidates would be to pick them randomly. In schools, that means giving equal chances to children living in a catchment area. In universities, it means picking oversubscribed students at random as long as they have achieved a basic threshold of academic grades.

If lotteries are a step too far, we need more systematic use of contextual offers at universities – providing lower grade offers for full-time and part-time students who have excelled despite their circumstances. We also need to increase school funding for our poorest pupils to recognise the role played by teachers in improving lives despite growing inequalities outside the school gates.

Community – restoring local opportunities

There are many programmes catapulting a lucky few into elite universities and prestigious professions. But there is scant evidence of effective regional rejuvenation for those ‘left behind’.
We need a new model of social mobility – one that seeks to improve both absolute and relative levels. The evidence suggests a mix of factors is required: affordable housing; proximity to jobs; connected and integrated communities; and good local schools with good teachers.

People want decent jobs, and rewarding lives, in their own communities. It is no longer a case of the North versus the South, but London versus the rest. The escalating costs of the global metropolis are making it increasingly inaccessible to all but the privileged few. We should redouble efforts to relocate major employers outside London to create opportunities elsewhere.

Decency – creating the skills to pay the bills

We need to reassess Britain’s emerging industrial model in which lower-level work is contracted out to temping agencies and other contractors. It has created a two-tier system between those pursuing seamless career progression and those stuck in dead-end jobs lacking security, progression or rights. Economic growth needs to be inclusive growth. We need to establish minimum rights to create decent jobs, with career progression built in.

We also need urgently to consider reforms to address the failure to provide the most basic functional skills for hundreds of thousands of school leavers. For them, the academic approach is not working. Children should be assessed against a basic threshold of key skills required to get on in life, taught as part of a practical, meaningful jobs-focused curriculum.

Final words

Failure to do something will store up greater social and economic problems for future generations – our social mobility problem mirrors our environmental challenge in this respect. But it is entirely possible to create a collective community-based culture, a fairer education system, a stronger economy and a more equal society that working together would boost social mobility and social justice once again.

Further reading

Elliot Major, L, and S Machin (2020) What Do We Know and What Should We Do About Social Mobility?, draft manuscript.
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A series of background briefings on the policy issues in the December 2019 UK General Election

Education and Skills

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#GE2019Economists
Education and Skills

**CEP ELECTION ANALYSIS**

Jo Blanden, Sandra McNally, Gill Wyness

November 2019

**Summary**

- A major weakness in the UK is the long tail of poorly performing schools and pupils, where the UK does not perform well relative to other countries, especially on basic skills.

- Austerity has caused school expenditure to fall dramatically and this is likely to have had big detrimental effects on the learning of young people, especially those from disadvantaged backgrounds.

- Large-scale structural reform – converting schools into academies – has not been successful for the most part. The focus needs to be on recruitment and retention of high quality teachers.

- The few people who attend private schools have a significant advantage in school examinations, in the probability of attending university and in the labour market.

- A third of young people do not get good GCSEs and often languish in the education system and the labour market. They are in danger of being forgotten in the election debate.

- Whether apprenticeships are a good investment depends on the type of apprenticeship on offer and whether they are directed at younger or older people. The debate on employer investment in skills needs to be widened beyond use of the apprenticeship levy.

- To date, expansions of early years provision has not been very successful in improving child development. As this policy also has fairly small effects on labour supply, this policy is primarily a financial transfer to working families.

- The increase in university tuition fees does not appear to have discouraged full-time enrolments. The recent Augar review has much to say about the financing of higher education. Whether political parties will engage with the detail remains to be seen.
Introduction

Debates about how to improve education and skills are likely to be an important theme in the run-up to the general election. This briefing summarises evidence on education and skills from the Centre for Economic Performance (CEP). It covers key issues across all educational phases, summarising what we know and considering some of the policy changes that might help to improve outcomes.1

Education plays many important roles in society, but this briefing focuses on economic objectives. Education and skills improve the productivity of individuals, helping them to advance in the labour market and increasing national productivity. Improving education and skills for the disadvantaged is key to helping to reduce inequality and improve social mobility across generations.

The UK is mid-table overall in most international rankings of schools (LSE Growth Commission, 2013). A major weakness is the long tail of poorly performing schools and pupils, where the UK does not perform well relative to other countries. Austerity has caused school expenditure to fall dramatically and this is likely to have had big detrimental effects on the learning of young people, especially those from disadvantaged backgrounds.

Unfortunately, the flagship academies policy has for the most part made little difference to overall pupil outcomes. At the same time, private schools continue to offer a substantial advantage to pupils in terms of examination results and the probability of attending university. Individuals who are educated in private schools earn more and this pay premium has increased significantly over time.

In early years education, efforts to improve access to good quality provision, have not (so far) made much difference to the educational attainment of children. The number of apprenticeship starts have reduced. One area in which the UK has done well is in the increased enrolment at universities. Despite major changes to university financing, there has been no decline in enrolments, but there has been a dramatic reduction in part-time students.

Early years

Early years policy touches on two politically hot topics: social mobility and gender equality. Children from disadvantaged backgrounds are already behind when they start school and achievement gaps continue to grow throughout school, making a substantial contribution to the low intergenerational mobility in the UK (Goodman and Gregg, 2010).2

Early education has the potential to change this by helping to improve child development and enabling children to start school on a more level playing field. The provision of childcare, which goes hand in hand with this education, can enable mothers to work, raising family income and preventing women from experiencing gender pay gaps, which have been shown to increase strongly when women become mothers.

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1 Education is a devolved area of policy in the UK. Most of the research cited in this briefing has been undertaken for England specifically.

2 See also the CEP Election Briefing on Social Mobility by Lee Elliot Major and Steve Machin. [http://cep.lse.ac.uk/pubs/download/ea045.pdf](http://cep.lse.ac.uk/pubs/download/ea045.pdf)
**Childcare**

Our research on childcare has focused on the impact on child development.

Unfortunately, the blanket expansion of free childcare appears to have had limited effect. Blanden et al (2016) show that the initial roll-out of 12.5 hours of free part-time education and care for three year olds in the early 2000s (which subsequently was expanded to 15 hours) had a minimal effect on children’s educational achievement. This is in large part because most children were attending similar provision before it became government funded, so their ability to access early education did not change much.

Even if policy is able to increase attendance, Blanden et al (2019) suggest that only high quality provision has a measurable effect on outcomes: spending more months receiving early education substantially improves child development only when the child attends an Ofsted rated ‘Outstanding’ setting. This clearly has implications for social mobility if disadvantage families struggle to access high quality provision.

Unfortunately, Blanden et al (2019) show that achieving high quality in this sector is not easy. For example, putting more graduate-trained workers into nursery has very little effect on children’s outcomes.

Policies on early years education and care have multiple objectives: improving children’s outcomes, supporting maternal employment and easing family finances for working parents. Any policy pledges in this area need to be carefully considered in light of these objectives. In the past, expansions of early years provision have not been very successful in improving children’s development, but they have had more impact in the other two domains.³

Based on available evidence to date, policies to expand provision of free childcare are effectively a transfer to ‘working families’. To have effects on child development, there would need to be a focus on the quality of provision, which would require substantial investment. There needs to be a debate on whether universal coverage or targeted spending on quality provision is a better use of public funds. Much depends on the primary objective of the policy.

**Schools**

**School expenditure**

In the sustained climate of austerity since the global financial crisis in 2008, school education budgets have suffered (despite being relatively protected compared with other public services). Britton et al (2019) show that total school spending per pupil in England has fallen by 8% in real terms between 2009/10 and 2019/20. The bulk of these funding cuts were driven by a 57% reduction in spending per pupil on services provided by local authorities and a more than 20% cut in sixth form funding per pupil.

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³ Brewer et al (2018) find that providing childcare for 30 hours per week does improve maternal employment, by a few percentage points, but it is not transformative. Since September 2018, ‘working families’ have been able to access 30 hours of free childcare, and the positive impact of this on family finances was highlighted by the government as an important motivation for this extension.
Such substantial cuts are likely to have significant negative effects on pupil outcomes. Gibbons et al (2018) exploit a quirk in the national funding formula to examine the impact of funding on educational outcomes for pupils age 11.4

Changes in school expenditure have a substantial impact on pupil achievement, especially for those from disadvantaged backgrounds. A 30% increase in average expenditure per pupil (over four years) would reduce the gap between the UK and the top performer in the PISA (2015) international rankings by over a third.5 If this increase were all spent on disadvantaged pupils, our estimates suggest that it would almost eliminate the (very large) attainment gap between pupils eligible to receive free school meals and other pupils.

Academies

At the same time as responding to the overall level of funding, schools are also adapting to continuing changes to the amount of autonomy that they can exercise.

Up until the early 2000s, most state schools in England operated in close collaboration with their local authority. ‘Academy’ schools were initially seen as a remedial policy targeted at a small number of secondary schools. The idea was that private sector ‘sponsors’ would take control of struggling state schools and be given the freedom to innovate.

The initial programme was small scale with just over 200 (about 3%) secondary schools having gained academy status before 2010. Eyles and Machin (2019) and Eyles et al (2016) find that the short- and long-term effects of attending these schools were positive and substantial. Key changes included a change of leadership and a change in the curriculum offered.

The academies programme has changed in nature and scale since 2010 when the coalition government created a radical new programme. Currently, over 70% of secondary schools are academies and just over a quarter of primary schools (which were permitted to convert by the 2010 Academies Act). Over time, many of the original requirements to become an academy have been removed (such as the requirement to have a sponsor: most academies do not).

The characteristics of schools that converted to academy status from 2010 onwards differ markedly from the characteristics of the small number of schools that converted to academies in the early 2000s. The latter had a high percentage of pupils with low prior attainment and from disadvantaged backgrounds. The opposite is true for schools that became academies after 2010. This means that it is not possible to extrapolate from the early results on the effects of academies, to schools that converted following the major expansion in 2010.

Unfortunately, for the most part, the expanded programme has not improved outcomes for pupils attending these schools (Andrews et al, 2017). This is the case for both primary and secondary schools. For example, Figure 1, taken from Eyles et al (2017) shows that converting to academies had zero effect on the educational attainment of pupils attending primary schools (key stage 2 performance). The bars in the figure show the causal effect of attending a primary school that converted to an academy at the time of conversion (C) and several years before and after conversion: conversion to a new status did precisely nothing for pupils attending these schools.

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4 This quirk leads to schools on either side of a local authority boundary getting very different levels of funding.

5 In the PISA 2015 results, Singapore was the top OECD performer in mathematics with a score of 564. The UK was ranked as number 27 with a score of 492.
Figure 1: The effect of academy conversion on pupil outcomes at key stage 2

![Figure 1: The effect of academy conversion on pupil outcomes at key stage 2](image)

Note: From Eyles et al (2017): this shows instrumental variable (IV) estimates from an event study for pupils attending academies four years prior to academy conversion (c-4) to three years after (c+3). The effects of being in an academy post-conversion are numerically small and insignificant (as the c to c+3 coefficients all overlap with the zero line on the figure). Moreover, there is no sign of pre-policy trends, nor any gradual improvement in results post-conversion.

Politicians of all parties have put too much faith in changing school structures. Unfortunately, the evidence suggests that such changes can be costly and do not always work. It is more important to address the reasons why schools underperform in the first place, such as lack of funding and, in particular, difficulty in recruiting and retaining good teachers. The economic research evidence has an unusual level of agreement that improving teacher quality is particularly efficacious for student outcomes.6

**Private schools**

Private schools offer high quality education, but at a price that is out of reach for most parents. The issue of private schools and their status is again on the agenda, in the debates on social mobility, on the private schools’ charitable status and on inequality. This is not surprising given that the evidence on the advantages conferred by private schools is clear. While 6% attend private schools, they do much better in GCSEs and A-levels. In 2018, the proportion of private school students achieving A*s and As at A-level was 48%, compared with a national average

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6 Hanushek (2011) estimates that replacing the bottom 5-8% of teachers with average teachers could move the United States near the top of international mathematics and science rankings with a present value of $100 trillion. Of course, there are plenty of other school-level policies that are also effective for improving educational outcomes (see, for example, Cassen et al, 2015).
of 26%; while for GCSEs, in terms of achieving an A (or grade seven or above), the respective figures were 63% and 23% (Green and Kynaston, 2019).

As a consequence, university attendance and graduation by students educated at private schools are also disproportionately high. But conditional on prior attainment, private school students are outperformed at university (Naylor et al, 2004).

But on entry to the labour market, the advantage switches back on again. Figure 2 shows a significant wage premium of private school over state school for the 1958 and 1970 birth cohorts. Moreover, this has been rising over time. In 1991, at age 33-34, the average private/state advantage was 25%; by 2004, the pay premium had significantly increased to 41%, with similar magnitude increases for men and women.

Figure 2: The private/state school wage differential

![Figure 2: The private/state school wage differential](image)

Source: Elliot Major, L, and S Machin (2018)

Further and higher education

Post-16 education: the forgotten third

New T-level qualifications and reforms to higher education (free or otherwise) will not touch the bottom third of students who each year fail to achieve a grade 4 in GCSE English and mathematics. These pupils have been dubbed the ‘forgotten third’. These pupils will usually go to colleges of further education to enrol in low-level qualifications (level 2 or below).

Nowhere is the education system more confusing. There are many different qualifications and no clear pathways. Hupkau et al (2016) show that many such pupils come from disadvantaged backgrounds and that fewer than half will progress to education at level 3 or above (that is, A-level or equivalent).

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7 https://www.ascl.org.uk/Our-view/Campaigns/The-Forgotten-Third
One major barrier to progressing to further education comes from poor English language results at GCSE. Machin et al (2018) show that even narrowly missing a grade 4/C in GCSEs can have major consequences for pupils. The administrative data that we use follows the cohort that took the GCSE examination in 2013 over the next three years of their lives.

The results show that narrowly missing the threshold in English language decreases the probability of enrolling in a higher level qualification by at least 9 percentage points (illustrated in Figure 3). There is a similarly large effect on the probability of achieving a higher (‘full level 3’) academic or vocational qualification by age 19. There is also an effect on the probability of entering tertiary or higher education.

Perhaps most surprisingly, narrowly missing the threshold increases the probability of dropping out of education at age 18 by about 4 percentage points (in a context where the national average is 12%) – illustrated in Figure 4. It increases the probability of becoming ‘not in education, training or employment’ (NEET) by about 2 percentage points.

The effect of grade C/4 on the marginal student

Figure 3: Enrolling in level 3

Figure 4: NEET

Note: From Machin et al (2018): the figures show how outcomes for pupils ‘jump’ at the threshold for grade C in English language (‘grade 4’ in the new system). The ‘original marks’ are before any appeals are made (AQA data). See the paper for full analysis.

We show some evidence on the mechanisms through which failing to reach this threshold in English leads to poor outcomes. These involve a narrowing of opportunities that arise within the educational system in the choice of post-16 institution and course; pupils end up in institutions with less well performing peers.

In a well-functioning education system, there would be ladders for the marginal pupil – or at least alternative educational options with good prospects. Machin et al (2018) suggest that the marginal pupil who is unlucky pays a high price.

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8 Comparing pupils on the threshold of success and failure makes it possible to explore whether just passing or just failing has consequences for them in relation to their probability of early drop-out from education (and employment) and their probability of accessing higher level courses, which are known to have a positive wage return in the labour market.
Politicians who are serious about addressing social mobility and the shortage of people progressing within vocational education need to do more for the third of young people who are not able to access level 3 qualifications and get forgotten. The policies put forward by parties to date do not address this group of people.

**Apprenticeships**

Although the vocational system has many problems, apprenticeships have a good reputation and are frequently put forward as a way of addressing the UK’s skill problems. The purpose of apprenticeships is to address two important problems in the UK: poor productivity; and a significant fall in employers’ investment in training over recent decades (NAO, 2019).

Apprenticeships have been a focus of policy in the last few years with a government commitment to increase the number of apprenticeships to three million over five years (2015-2020) and the introduction of the apprenticeship levy (which is payable by large firms but can be clawed back to cover the direct costs of apprenticeship training).

Cavaglia et al (2018) investigate whether there is a payoff to starting an apprenticeship for young people in England. We use administrative data on school leavers to estimate whether those who undertake an apprenticeship earn more compared with if they had undertaken equivalent vocational education in the classroom.

There is a sizeable average earnings return, although it varies strongly for different types of apprenticeship. We look at people who finished their GCSEs in the early to mid-2000s, so that we can observe their earnings in the labour market a few years later.\(^9\)

Figure 5 illustrates the median earnings over time for men and women who completed their GCSEs in 2003 (that is, in the labour market between 2008 and 2015). The figure shows much stronger earnings growth for men than women. It also shows that those who undertook an apprenticeship have higher earnings than similar people who did not (that is, people with the same highest level of educational achievement). Third, the difference in earnings between those with and without an apprenticeship is much higher for men than for women.

These results are borne out in detailed analysis where we include many controls (such as prior attainment and demographics) and where we try to deal with the causality issue. The difference in average returns of an apprenticeship between men and women is largely explained by different sectors of specialisation. For example, engineering and construction are very popular with men, and child development and health and social care are very popular with women. These sectors have vastly different returns to undertaking an apprenticeship. The wider message is that apprenticeships are not all created equal. The individual returns (and likely consequences for productivity) vary according to the type of apprenticeship.

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\(^9\) The types of apprenticeships undertaken then are similar to those currently on offer, although very recent reforms (from frameworks to standards) are too recent to evaluate.
Since the introduction of funding and regulatory changes in 2017, there has been a large fall in the number of apprenticeship starts in most sectors. While the quality of apprenticeships has probably increased as a result of reforms, concerns include the fact that young people (those under 25 years old) account for less than 60% of all starts. Morris and McIntosh (2018) show that the wage return (and likely contribution to productivity) is much higher for younger workers.

The policy debate includes whether regulations should change how the apprenticeship levy is spent and indeed whether it should continue to be used only to fund the training of apprentices (as opposed to other forms of training). Given that different types of apprenticeship produce very different returns, there is a good case for a combination of incentives and regulation to influence how employers can spend levy funding.

As apprenticeships are not the most suitable form of training for many purposes (for example, for ‘upskilling’ of older workers), there is also a good argument for enabling employers to

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10 The requirement that 20% of an apprentice’s time is spent off the job is now written into funding rules. The ongoing change from apprenticeship frameworks to standards is also likely to increase quality.
spend the levy on other forms of accredited training. But this will not be sufficient on its own because 98% of employers do not pay the levy. There needs to be a wider discussion of how employers may be given incentives to invest in their workforce. For example, Costa et al (2018) make the case for human capital tax credits.

Higher education

Despite the £9,000 annual undergraduate fee cap having been in place since 2012 (increased to £9,250 per year in 2017) higher education enrolments have not been dramatically affected. The trend in enrolments has been somewhat flat, although this cannot be tied directly to the fee hike.

Of potentially greater concern is the severe downturn in part-time enrolments (see Figure 6). This is likely to have arisen as a direct result of the 2012 reforms, which led to increases in part-time fees, but with restrictions on income contingent loans, very much highlighting the importance of this feature (Callender and Thompson, 2018).

**Figure 6: Enrolments of first year students**

![Enrolments of first year students](image)

Source: Higher Education Statistics Agency, 2019

The Labour Party declared in their 2017 manifesto that they would abolish fees and have maintained this pledge entering the 2019 election. Abolishing fees would do little to help poor students since fees are not paid upfront, but instead on graduation, once the graduate is earning over £25,000 per year (at 9% of earnings above this threshold). It would also do little to help low earning graduates, many of whom will never have to repay their fees in full (Belfield et al, 2018).
The broader context is that individuals from lower socio-economic backgrounds are less likely to enter university at all, and in particular are less likely to attend Russell Group universities. This is mainly explained by prior attainment at GCSE and A-levels (Chowdry et al, 2013). The level of tuition fees is immaterial for these individuals.

A policy of low (or zero) tuition fees would benefit those who go on to do well in the labour market disproportionately and it would be paid for by the majority who do not go to university (in the form of higher taxation). Murphy et al (2019) highlight many other issues with free tuition systems, showing that the UK’s increase in fees dramatically improved investment in the sector, coinciding with university expansion (which typically benefits more disadvantaged students), and increased money for student support.

The other political parties are less clear in their stance on tuition fees. The recent Augar review of higher education finance in the UK highlighted many problems with the current fee system. One key issue is that the average fee charged by universities is higher than was anticipated by the government and, because of the income contingent repayment system, a large proportion of students never repay their fees, leaving government to cover the cost. There is huge variation in the returns to a degree by subject and institution (Britton et al. 2019) and thus some types of student have far greater ability to repay their loans in full than others.

Moreover, universities have a greater incentive to offer lower cost courses (such as creative arts and humanities) than higher cost subjects such as STEM courses (which the government typically sees as higher value), given the fee cap is the same for each. Augar recommended that the fee be reduced to £7,500 per year. Theresa May backed this drop in fees, but it is less clear that Boris Johnson is in favour of a fee reduction.

The Augar review recommended that the total reduction in resources from the fee cut (to £7,500 per year) be matched with an equivalent increase in average per student grant funding from government, so that the average per student resource to the sector stays level in cash terms.

There remain other issues with the current arrangements for financing higher education. Most notably, a recent change in government accounting rules means that the amount of student loans not expected to be repaid must now be counted towards the government deficit. This increases the incentive for government to cut fees, and it also strengthens the case for re-introducing maintenance grants (which were abolished in 2016 in favour of loans). Dearden et al (2014) highlight the importance of student grants for participation.

The proposals in the Augar review were informed by research evidence as well as the views of key stakeholders. It remains to be seen whether political parties will engage with the arguments put forward in the review or whether the debate remains at a superficial level.

Final words

Increasing productivity and improving social mobility requires investing in the education and skills of individuals from the early years onwards. But resources are not infinite and some of the education policies proposed by the political parties are unlikely to produce any beneficial effect on educational outcomes - these include further structural change (for example, more

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11 This raises another issue of whether admissions to university should be contextual (i.e. take account of a person’s circumstances in some way).
‘academisation’ or more free schools); roll-out of early years provision with no change in quality; and the abolition of tuition fees.

These policies may be desirable (at least for some groups) for other reasons, but if funding was instead put into general school expenditure and improving teacher quality we would be likely to see positive effects on student outcomes.

Also relevant is who gets good quality education and the barriers that arise because of the admissions policies of schools and universities. Those attending private schools have high returns for their education and therefore equity issues are a cause for concern. The bottom third of the cohort languish within the education system and later on. Attention needs to be given to their acquisition of basic skills and their future trajectories in education and the labour market.

Further reading


Brewer, M, S Cattan, C Crawford and B Rabe (2018) ‘Does more free childcare help parents work more?’ (https://drive.google.com/file/d/1MRsg1NHia3zmaa0mSe2jpBBuJy-9qoRf/view).


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A series of background briefings on the policy issues in the December 2019 UK General Election

People, Places and Politics

Henry G. Overman

#GE2019Economists
People, Places and Politics: Policy Challenges of the UK’s Uneven Economic Geography

CEP ELECTION ANALYSIS

Henry G. Overman

- Economic performance varies widely between different places in the UK. On some measures, the performance gap has widened since the financial crisis. There is a broad North-South pattern, but also substantial variation within those areas.

- Having a better educated labour force is the most important driver of local economic performance. An increasing concentration of more educated workers in certain places and a growing earnings premium for graduates are the most important factors behind increasing spatial inequality.

- City size also matters, but much less than skill composition. Smaller towns can do well if they have lots of highly skilled residents. Bigger cities may struggle if they have lots of low-skilled residents.

- On some measures, London receives a disproportionate share of infrastructure investment. A more equal distribution would slow growth in London and might increase growth elsewhere, depending on how and where the money was spent. But the only way for infrastructure to have a big effect on spatial disparities is if it leads to the relocation of large numbers of skilled workers away from London.

- Local government in England has borne the biggest burden of austerity and cities in the North of England have been hardest hit. Austerity reduced redistribution and so it is partly responsible for the recent widening of spatial disparities.

- Providing a counter-balance to London may require some investment to be more spatially focused – for example, focusing infrastructure investment on a number of places, spread across the UK, that are doing relatively well with the aim of increasing productivity and employment in those areas. Policy then needs to make sure that people in disadvantaged communities can access the opportunities generated, which will require substantial intervention across a wide range of policy areas.

- Improving economic performance and helping to tackle the problems of ‘left-behind’ places are important policy objectives. But ultimately, we care about people more than places. Policies should be judged on the extent to which they improve individual opportunities and on who benefits, rather than whether they narrow the gap between particular places.
Introduction

Economic performance varies widely between the towns, cities and regions of the UK. On some measures, this variation has widened since the financial crisis. These disparities have already proved to be a key theme in the run-up to the 2019 general election. This briefing summarises evidence on spatial disparities from the Centre for Economic Performance (CEP), as well as the broader evidence base.

Spatial disparities are important because local social and economic conditions affect individual outcomes. For example, there are substantial differences in social mobility at the local level: where you grow up makes a difference to how much your family background affects your life chances. Spatial disparities also reflect individual inequality. For example, if individual inequality increases and poorer families are concentrated in particular areas, then spatial disparities will also increase.

The link between individual and spatial disparities is complicated by the fact that people can move around. This matters for thinking about what spatial disparities can tell us about important policy issues.

For example, the geography of the Brexit vote was highly uneven with some places more likely to vote Leave and others more likely to vote Remain. One explanation is that the Leave vote reflects the ‘revenge’ of ‘left-behind’ places – that is, it is a story not about individuals, but about shared anger by those living in places left behind by technological change and globalisation. The alternative is to think of this as a story about individuals, left behind by the same forces, and where they live.

The first way of thinking about this appears to be driving the current policy response. But the second is perhaps a more useful way of understanding why wealthy Sevenoaks and struggling Sunderland both voted Leave. Different kinds of people, with very different concerns about the European Union, living in different places – but agreeing on the same solution.

The other reason why individual mobility matters is because it means that policies targeted at specific places don’t necessarily end up benefiting the people that we hoped to help. For example, transport improvements in a poorer area don’t necessarily end up benefiting poorer families if those improvements then lead to higher rents and house prices that see them priced out of the neighbourhood.

Taken together, these two complications – the need to distinguish between people and place; and the fact that people move between places – mean that it is important for us to understand what is causing spatial disparities and to think carefully about who will benefit from the different policies proposed to address these disparities.

Disparities in the UK: it’s more than just a North-South divide

There is a broad North-South pattern to spatial disparities in the UK. Cities Outlook¹ is the most useful source of detailed data on the economic performance of UK cities. The 2019 report shows a very clear geography in terms of both output per worker and

employment, with cities in the Greater South East performing better. Eight of the 10 cities with the highest unemployment (claimant count) are in the North of England or Scotland.

There is also substantial variation within those broad areas: some northern cities (such as Manchester) are doing relatively well and some southern cities (such as Ipswich) are doing relatively badly. Despite many policy initiatives by the current and previous governments, these disparities remain large and persistent.

Indeed, these disparities have widened since the global financial crisis. Figure 1 shows a standard measure of the extent of spatial disparities (the coefficient of variation) calculated for the (NUT2) regions of the UK from 1980 to 2015, the last date for which we have data. Disparities fell between 1980 and the mid-1990s, increased in the early days of the Labour government before falling again. The increase in disparities since the recession has returned us to roughly the level of the 1980s.

Figure 1: Spatial inequality in the UK

Source: Author’s own calculations based on Eurostat data for NUTS2 regions of the UK
What are the economic forces polarising the UK?

*Better educated workers are concentrated*

According to Eurostat’s latest figures,\(^2\) in 2018, around 65% of inner London residents had tertiary education, the highest percentage in Europe. This was up from around 54% in 2010. In contrast, the proportion of residents with tertiary education in Greater Manchester was around 39% in 2018, up from 31% in 2010.

There is also a growing wage premium for graduates compared with people without degrees. Numbers reported by Elliot Major and Machin (2018) show that in 1980, male graduates earned, on average, 46% more than their non-graduate counterparts. In 2017, this earnings uplift was 66%.

Given a strong and growing concentration of more educated workers and a large and increasing wage premium for graduates, it is not surprising that the spatial distribution of higher skilled workers explains up to 90% of area-level disparities in wages in the UK (Gibbons et al, 2013).

**Figure 2: Shares of population with tertiary education**

\(^2\) Tertiary educational attainment (e.g. university, higher technical institution, etc.), age group 25-64 by sex and NUTS 2 regions, Eurostat Code: tgs00109
Bigger cities make firms and people more productive

There is a great deal of empirical evidence of the ‘agglomeration economies’ that underpin the relationship between a city’s size and the productivity of its inhabitants. Graham and Gibbons (2018) summarise results from 47 studies estimating these agglomeration economies, 12 of which are from the UK.

The consensus estimate suggests that once we allow for the unequal spatial distribution of higher-skilled workers, the elasticity of productivity with respect to size is around 0.02 to 0.03. This means that doubling city size increases people’s productivity by around 2-3%.

While these productivity effects are important, when it comes to GDP per capita, they can easily be swamped by spatial disparities in the share of skilled workers. This happens in the UK where (if we exclude London) the overall relationship between city size and GDP per capita isn’t very strong – as Figure 3 shows.

Our cities still benefit from agglomeration economies – someone with a degree moving from Blackpool to Manchester would be more productive – but this isn’t enough to encourage the sorting of highly skilled workers into some of our bigger cities outside London.

Figure 3: GDP per capita against city size for UK MSA
**Cities versus towns**

Because both skills and size matter, and skills matter much more than size, it’s not very helpful simply to distinguish between cities and towns. Smaller towns can do very well if they have lots of highly skilled residents. Bigger cities may struggle if they have lots of low-skilled residents, even if they may still do better than their surrounding regions.

The cost of living also matters, with housing supply a key determinant of differences in the cost of living across places. A small, rich town, with limited housing supply can easily have housing costs that offset any productivity benefits for households. Similarly, a large poorer city, such as Liverpool, may have housing costs that help offset some of the productivity advantages that workers would gain by moving to London.

Amenities matter too and we need to think about the three-way trade-off between differences in productivity, the cost of living and amenities if we want to understand who lives where and what are the implications for individual disparities.

**Underinvestment in the North**

Because London and the South East are rich and our tax system is progressive, there is a lot of redistribution from the South to the North. But on some measures, London receives a disproportionate share of investment in infrastructure.

A more equal distribution of infrastructure investment would slow growth in London. Whether it would increase growth elsewhere would depend on how the money was spent because the economic returns to infrastructure vary a lot across places.

The overall effect on regional inequalities would be limited since relative to the concentration of skilled workers, differences in infrastructure play a relatively small role in driving long-term disparities. The only way for infrastructure to have a big effect on spatial disparities is if it leads to the relocation of large numbers of skilled workers across the UK, away from London.

**The financial crisis and austerity**

London and the South East were initially hard hit by the recession, but they have recovered more quickly. Adjustment elsewhere has been slower and, as a result, spatial disparities have widened. Local government in England has borne the biggest burden of austerity and cities in the North of England have been much harder hit than those elsewhere (Cities Outlook 2019 provides more detail).

Given that austerity reduced redistribution, it is partly responsible for widening disparities. The resulting cuts to public services may mean that austerity hindered adjustment to the financial crisis and that the adverse effects on disparities could persist in the medium to long run.

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3 Fetzer (2018) shows that until 2010, the UK’s welfare state evened out growing income differences across the skill divide through transfer payments. This pattern markedly stops from 2010 onwards as austerity started to bite. The paper also suggests that austerity may partly explain Brexit.
What’s the appropriate policy response?

What should be the objective of policy? On the implications for overall economic growth, the debate is polarised. For some, it is obvious that spreading growth across the UK would make use of underused resources. For others, London and the South East are key, and we should focus on making sure they continue to perform well.

Planning restrictions

There is no evidence of large benefits from spatial redistribution and much evidence to show that very restrictive planning in London and the South East has been harmful (see Hilber, 2015). Hence, artificially restraining London’s growth does not seem like a desirable policy.

Improving economic performance outside the capital

Rather than focusing on London’s dominance, we should ask why other cities and towns do not offer similar economic opportunities and what can be done about it? Given what we know about the economic forces driving polarisation, there are two key questions:

(1) In which places could greater investment and other government support be used to increase productivity and help create jobs?

(2) How do we make sure that people can access these opportunities?

Evidence suggests that around 50% of people only ever work while living in the local labour market where they were born (Bosquet and Overman, 2019). This suggests that the policy response needs to be realistic about how far people are willing to move for work, particularly for less educated workers (the figure rises to 60% for those without a degree). Having ‘everyone’ move to London and the South East is not economically feasible, nor socially or politically acceptable.

The same is true for the other extreme: achieving a level playing field where productivity is equalized, and jobs are generated ‘everywhere’. We need to be realistic about the market forces at work. Equal outcomes across places requires places to have similar skill composition and to be of similar sizes. As with the previous strategy, this is not economically feasible, nor socially or politically acceptable.

London’s strong economic performance plays a large part in explaining widening disparities. Providing an effective counter-balance to London may require some investment to be more spatially focused – for example, by identifying a number of places, spread across the UK, that are doing relatively well and focusing infrastructure investment on achieving productivity and jobs growth in those areas.

Access to opportunity

Policy then needs to make sure that people can access the opportunities generated. The current debate often interprets this far too narrowly as being about ‘better transport’. In fact, we need to address multiple barriers – for example, through
investment in education, in childcare, in mental and physical health services – that prevent individuals from being able to access these opportunities. Barking and Dagenham have very good transport links to one of the largest concentrations of employment in the world, but this is not enough to prevent bad social and economic outcomes for households who live there.

**Housing costs**

We also need to address concerns over high housing costs in our more successful areas, as well as thinking about ways to encourage increased mobility. For example, how do we widen the horizons of young people growing up in disadvantaged areas to ensure that they are willing to commute or move to access opportunities offered in the broader local area?

**‘Left-behind’ places**

An effective policy response will require increased investment (LSE Growth Commission, 2013) and the reversal of austerity. ‘Left-behind’ places have high proportions of vulnerable people with complex needs and low levels of economic activity. This compounds their problems, as long-term unemployment, poverty, mental illness and poor health often go hand-in-hand.

CEP research suggests that small tinkering and minor tweaks of existing policies will not be enough to tackle the multiple barriers to social mobility faced in these places.

It is also important to be clear that spending in left-behind places does not always need to be justified based on economic performance. There are important public good arguments that could justify increased expenditure across a wide range of policy areas. For example, it is possible to argue for subsidising rural broadband as a public good while recognising that its economic impacts are likely to be limited.

Distributional arguments can also be used to support intervention. For example, reversing austerity cuts to welfare benefits would disproportionately benefit areas with high concentrations of disadvantaged households. But it is important to be realistic about the likely economic impact of these policies so that we properly consider sustainable sources of government revenue to fund this increased public expenditure.

**Devolution**

Discussion around the systems through which urban and regional economic policy is delivered often distracts attention from more fundamental questions about the effectiveness of particular policy interventions. There is a growing recognition that greater local control may be needed to improve policy effectiveness, although there is disagreement about the form that this devolution should take.

Whatever happens, it is important that policies that have wide-scale impacts (such as transport and housing) are coordinated across local areas and that the right kind of policies are targeted at different areas.
Differentiating the response in this way is controversial and difficult for constituency-based politicians (in both central and local government). The traditional policy mix – central government investments in local growth projects, transport and other infrastructure, funding for business support and access to finance, and a host of other interventions – has not properly addressed this challenge and has therefore been ineffective in narrowing disparities.

Final words

Spatial disparities in the UK are profound and persistent. Improving economic performance and helping to tackle the problems of left-behind places are both important policy objectives. Addressing these challenges requires a new approach to policy, one that allows for different responses in different places.

Such variation makes many people nervous. But it is important to remember that we should care more about the effect of policies on people than on places. Policies should be judged on the extent to which they improve individual opportunities and on who benefits, rather than whether they narrow the gap between particular places.

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or Romesh Vaitilingam: romesh@vaitilingam.com
Further reading


Elliot Major, L, and S Machin (2020) *What Do We Know and What Should We Do About Social Mobility?*, draft manuscript.


A series of background briefings on the policy issues in the December 2019 UK General Election

Housing

Paul Cheshire
Christian Hilber

#GE2019Economists
Housing

CEP ELECTION ANALYSIS

Paul Cheshire and Christian Hilber

November 2019

Summary

- Housing in London is the most expensive in any major prime city in the world. Over the last 40 years, the cost of housing in the UK grew faster than in any other OECD country, far outstripping earnings growth.

- Housing affordability deteriorated sharply after 2000 and, with a pause for the global financial crisis, has continued to get worse. The median house price in Greater London is 8.4 times the median income. The average house price across the UK is 4.8 times the average income.

- Home ownership overall rose steadily till 2003, then started to decline. Housing assets have been redistributed to older and richer people and to those whose parents were themselves home owners. Together with increasing regional house price differences, this means that more and more people are not just excluded from valuable assets but priced out of access to better jobs.

- The housing crisis is largely due to a lack of housing. The UK’s planning system is the main cause of this. Construction of new homes, especially in higher demand areas, has been decreasing steadily since the 1970s.

- The main constraint on supply is lack of space: Green Belts prevent outward growth, height restrictions stop upward growth. Reform may be politically difficult but there is enough Green Belt land of no environmental or amenity value close to commuter stations in just five city-regions, to build 2 million homes. Coupled with aligning incentives to encourage building this could raise £100 billion of revenues to fund infrastructure and local services.

- Given the constraints on housing supply, the main effect of policies stimulating demand is to increase house prices. In supply-constrained, typically high demand areas, Help-to-Buy actually made housing less affordable. The price increase of newly-built homes outweighed the help to individuals. In these areas house building was static, only profits of registered developers increased.

- Taxation contributes to the problem. Council Tax provides scant incentive for local communities to allow development. Together with the politicised local decision-making in planning, this fuels NIMBYism. Stamp Duty taxes mobility. It discourages downsizing and hampers growing families buying roomier housing.

- A local land tax with annual revaluation and proceeds flowing to local communities would provide incentives for development.
Introduction

‘The sense of injustice (Generation rent) feel at being denied a fair chance to buy a property is one of the cardinal political developments of our time… the growing gulf between Britain’s ‘property-haves’ and ‘property-have nots’…casts serious doubt on the UK's claim to be a progressive society…the central argument of *Home Truths* is that we must radically reform the supply side.’ Liam Halligan, *Home Truths*, 2019

Housing affordability is a key concern of an ever-larger fraction of UK voters who are crammed into artificially limited space. It also underlies the sense of being shut out of prosperity and unable to escape declining local economies. The historical rise in the real price of housing means a lot of wealth is now tied up in housing assets, mainly in land as a financial asset, reflecting its shortage, and there are many vested interests in keeping things this way (such as well-established homeowners and landlords). Substantive reforms could solve the housing crisis, but with a few honourable exceptions, politicians, especially ambitious ones, of all stripes, back away from such reforms out of fear of being demonised by the vested interests. Instead, proposed policies tend to tackle the symptoms – rather than the causes – of the UK’s housing crisis; or worse – like the Starter Homes scandal – they are designed just to give the appearance of caring.

This election analysis provides an overview of the key issues and the underlying causes. It discusses the merits and demerits of key policies. It concludes with a discussion of those reforms that ought to be on the policy agenda.

The housing affordability crisis

The central housing policy issue in the UK is the so-called ‘affordability crisis’ – the fact that housing has become ever more unaffordable, especially for younger households trying to get on the housing ladder.

The homeownership rate for families in the UK rose steadily till 2003. It has then declined until 2015 when the rate stabilised. For younger families under 35 the decline started much earlier, in 1989/90, and it was much more pronounced. The proportion of families with household heads aged between 25-34 years fell from 50.8 in Q4 1989 to 24.5 in 2016. The rate has since stabilised, possibly partly as a consequence of Help to Buy triggering new construction in areas with less unresponsive supply (see below). This evolution of homeownership attainment for the young is in stark contrast to older families. The proportion of home-owning families with household heads aged 65 or older, has been rising throughout the 2000s and 2010s, reaching 75.1 in 2017.

This redistribution of housing assets to the older, as a result of the increasing difficulty of moving into home ownership for the young, is mirrored in the growing importance of the ‘bank of mum and dad’. As another CEP Election Analysis shows, between 2000 and 2012 a young person’s chance of home ownership fell sharply if their parents were not already home owners.

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1 This Election Analysis builds on the CEP Election Analysis on Housing and Planning (Hilber, 2015).
2 Roughly 5-fold since the mid-1950s. See Cheshire (2014) for more detail.
3 Housing tenure by age categories have been derived from the Resolution Foundation website: https://www.resolutionfoundation.org/data/housing/ (last accessed on 25/11/2019).
4 On Social Mobility: [http://cep.lse.ac.uk/pubs/download/ea045.pdf](http://cep.lse.ac.uk/pubs/download/ea045.pdf)
The price of houses includes their value as assets as well as the value of housing services they provide. Since it is real incomes that mainly drive the demand for housing services, rents – their price – have risen less since the financial crisis. But real incomes even now have barely regained pre-crisis levels. Asset yields have remained seriously low so really what has been observed is a process of price adjustment as yields have fallen.

House prices in the UK – particularly in London and the South East – are among the highest in the world. In a ranking of the buying price per square metre of a ‘comparable flat’ in a prime area of a country’s prime city, if we ignore the tiny city-state and tax haven of Monaco, the UK prime city, London, is head and shoulders the most expensive in the world. (Globalpropertyguide.com, 2019). Since, other things equal, one would expect the cost of housing space to rise with city size, we should also take population into account in judging a city’s relative housing price. In Table 1 all values are relative to London and it shows how expensive London housing is, especially when London’s size is taken into account. Tokyo is almost three times the size of London, for example, but housing costs are one half those of London. Since 2014 costs in London have moved even further ahead of the next most expensive city.

Table 1: International comparisons of relative housing costs: prices per square metre

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<tr>
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<tbody>
<tr>
<td>London</td>
<td>100.0 (1)</td>
<td>100.0 (1)</td>
<td>100.0</td>
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<tr>
<td>Hong Kong</td>
<td>66.1 (2)</td>
<td>58.5 (2)</td>
<td>58.9</td>
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<tr>
<td>New York</td>
<td>53.6 (3)</td>
<td>57.9 (3)</td>
<td>134.8</td>
</tr>
<tr>
<td>Paris</td>
<td>53.3 (4)</td>
<td>53.5 (5)</td>
<td>97.1</td>
</tr>
<tr>
<td>Moscow</td>
<td>46.4 (5)</td>
<td>49.6 (6)</td>
<td>98.9</td>
</tr>
<tr>
<td>Geneva</td>
<td>44.2 (6)</td>
<td>48.0 (8)</td>
<td>6.7</td>
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<tr>
<td>Vienna</td>
<td>42.3 (7)</td>
<td>48.3 (7)</td>
<td>22.5</td>
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<tr>
<td>Singapore</td>
<td>44.2 (8)</td>
<td>46.3 (9)</td>
<td>44.6</td>
</tr>
<tr>
<td>Mumbai</td>
<td>33.2 (9)</td>
<td>31.4 (12)</td>
<td>177.0</td>
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<tr>
<td>Tokyo</td>
<td>31.2 (10)</td>
<td>55.0 (4)</td>
<td>289.7</td>
</tr>
<tr>
<td>Helsinki</td>
<td>24.3 (11)</td>
<td>26.9 (15)</td>
<td>12.1</td>
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<td>Toronto</td>
<td>23.9 (12)</td>
<td>35.6 (11)</td>
<td>56.0</td>
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<td>Rome</td>
<td>23.2 (13)</td>
<td>27.5 (14)</td>
<td>33.5</td>
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<tr>
<td>Sydney</td>
<td>22.1 (14)</td>
<td>36.1 (10)</td>
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<tr>
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<td>28.8 (13)</td>
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<td>Berlin</td>
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<td>24.7 (16)</td>
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<tr>
<td>Copenhagen</td>
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<td>17.9 (17)</td>
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<td>Bratislava</td>
<td>7.7 (18)</td>
<td>12.9 (18)</td>
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5 UK house prices are also extremely volatile. Real house price swings in the UK were substantially larger during the last full real estate cycle than those in even the single most volatile metro area in the United States (Cheshire, 2009, and Hilber and Vermeulen, 2016).
UK housing costs are not only very high in absolute terms and relative to other countries but also relative to incomes. Conventionally measured ‘affordability’ – median house price to median income – in the Greater London area is now at its worst since data became available, despite the Great Recession. According to Demographia (2019), the price-to-income multiple in the Greater London area in 2018 was 8.3, ranking its affordability at 294th out of 309 housing markets rated. For the entire UK, the median multiple was 4.8 – in their categorisation ‘seriously unaffordable’. The Demographia study also notes that housing is particularly unaffordable in those countries that have adopted planning systems similar to the UK’s.

The UK’s affordability crisis has its epicentre in London (see Figure 1) but extends over most of England and all of the South East. It has been developing slowly since the 1960s accelerating in the early 2000s. Real house prices – but not real incomes – have grown faster in the UK over the last 40 years than in any other OECD country (Hilber and Vermeulen, 2016).

**Figure 1: Housing Affordability in England: Median House Price/Median Incomes by Local Authority, 2016**

*Note:* Income data not available for some LAs which are left blank

*Source:* (Cheshire and Carozzi, 2019).
Who are the losers in this affordability crisis? The obvious answer is young households, but although existing homeowners seemingly benefit from higher asset prices, most of them are also adversely affected. This is because they cannot realise the ‘gains’ unless they downsize their housing consumption, give up owner-occupation and rent or sell their house to move abroad. In the interim, they have to live in cramped spaces (Hilber and Vermeulen, 2016).

**What caused the housing affordability crisis?**

Despite rising real incomes and strong population growth, construction of new housing has been decreasing steadily since the 1970s, leading to a substantial housing shortfall. Looking at the data for completions reveals the scale of the problem starkly. In the 30 years 1959-1988, 7,449,160 houses were built in England: in the 30 years 1989-2018, only 3,328,850. That suggests a shortfall of 3,120,310 homes – 104,000 a year – over the last 30 years. All major political parties agree that today there is a serious shortage of housing, that there is not enough housing construction and that housing should be more affordable.


This system, which dates back to the Town and Country Planning Act of 1947, is extraordinarily rigid by world standards. The real restrictions came, however, with the Conservative government elected in 1951 which phased out the New Towns Policy and, in 1955, introduced a Green Belt designed not to provide ‘green lungs’ for city-dwellers but rigidly restrict the outward expansion of London. To this is added strict controls on height, lack of fiscal incentives at the local level to develop and ‘not in my backyard’ (NIMBY) behaviour empowered by the politically controlled and discretionary planning regime. The British use of so-called ‘development control’ to decide each significant proposal for development makes all decisions about whether development can go ahead subject to local political calculations and therefore more subject to lobbying and more uncertainty.

Evidence for England suggests that planning constraints magnify the impact of growing housing demand on house prices across the country, but the effects are starkest in London and the South East. Housing is being built where there are the fewest disincentives to permit development rather than where demand is greatest. Demand is for roomier houses in areas close to productive jobs. Instead we have been building relatively more houses where the local economy is slack (but there is lots of brownfield land) and population relatively slow growing. Compare Barnsley and Doncaster with Oxford and Cambridge: population growth and house building, show exactly the reverse pattern to that which logic would suggest: systematically fewer houses built in the more prosperous and faster growing local economies. In the nearly 40 years from 1980 to 2018, 56,340 houses were built in Barnsley and Doncaster combined but

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6 In measuring new supply what matters is house building – completions – not that increasingly popular measure ‘net additional dwellings’. This is increasingly popular with politicians because, of course, the greater the shortfall of new supply, the less the incentive to demolish obsolete houses. Instead they are refurbished and sub-divided. Obsolete offices and industrial buildings are converted into substandard housing. So the volume of net additional dwellings rises relative to actual building of new houses – completions - the worse the shortage of houses is.

7 The effects of the UK’s planning system are not confined to housing. Cheshire and Hilber (2008) provide evidence that firmly links regulatory constraints to the extraordinarily expensive price of UK office space. Cheshire et al (2015) demonstrate that ‘Town Centre First’ policies in England imposed a loss of output of 32% on a typical store opening after the rigorous implementation of the policy in 1996.
only 29,430 in the combined Cambridge and Oxford. The pattern of relative population growth was almost the reverse: a 95,079 increase in Oxbridge against a 29,430 increase in the Barnsley and Doncaster pair (Cheshire and Carozzi, 2019).

Research analysing data for England over recent decades finds that in places with tight regulatory constraints, house prices respond much more strongly to labour demand shocks than in places with less tight constraints (Hilber and Vermeulen, 2016). According to their estimates, house prices would have risen by about 100% less in real terms between 1974 and 2008 if, hypothetically, all regulatory constraints were removed.

Removing all constraints is of course neither practicable nor desirable. Constraints can generate public goods in the form of open spaces, wildlife habitats and scenic land or city-scape. However, pragmatically, if the South East (the most tightly regulated English region) had had the regulatory restrictiveness of the North East of England (less regulated, but still restrictive by world standards), house prices in the South East would have been roughly 25% lower in 2008 and perhaps 30% lower in 2015. Moreover, these are lower bound estimates for several reasons, including the fact that restrictions were already affecting prices in 1974.

Why are not all areas equally restrictive? In wealthy local authorities with strong demand pressures, homeowners and landlords have most assets to protect so they have the strongest incentives to restrict local development either via voting or lobbying (Hilber and Robert-Nicoud, 2013). Struggling places with weak demand and high unemployment may be more prone to permit commercial development to create local jobs. Even residential development may become palatable since it creates construction jobs and there is a relative abundance of ‘brownfield’ land.

What about physical, geographical and topographical constraints? Constraints due to scarcity of developable land mainly apply to highly urbanised areas (Hilber and Vermeulen, 2016). But in these areas – most pronounced in the Greater London area – the effect is large in the sense that due to scarcity constraints, house prices increase strongly in response to positive demand shocks.

**Does Help to Buy create new housing and more homeowners or merely push up prices and profits of developers?**

**Effects of Help to Buy on house prices and construction volumes**

The government’s ‘Help to Buy’ policy stimulated housing demand – which, in theory at least, could have translated into new housing being supplied and higher homeownership. However, to the extent that housing supply is unresponsive to demand shocks, the main effect of the policy may just be to push up house prices.8

By far the most popular among the various Help to Buy offers is the Equity Loan scheme. It provides a loan for up to 20% of the house value (or inside London, up to 40%) to buy new build properties. Buyers of such properties also do not pay interest for the first five years after purchase.

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8 As a CEP Urban & Spatial Programme Blog entitled ‘Help to Buy’ pointed out immediately after its first introduction: http://spatial-economics.blogspot.com/2013/06/.
Exploiting two spatial discontinuities in the equity loan scheme – at the boundary of the Greater London Authority and at the English/Welsh border – Carozzi et al (2019) explore the effects of the scheme on house prices, construction volumes and developer profits, among other outcome measures.

What they find is that in the Greater London Authority, where housing supply is subject to severe long-run constraints (including a Green Belt three and a quarter times its area surrounding it) and housing is already extremely unaffordable, Help to Buy substantially increased house prices. In fact, their estimates suggest that prices increased more than the present value of the equity loan subsidy. Yet, the policy had no discernible effect on construction volumes or aggregate private mortgage lending.

Help to Buy did increase construction numbers, without significantly affecting prices near the English/Welsh border, an area with relatively flexible supply constraints, virtually no Green Belt constraints, and commensurately affordable housing.

What these findings more broadly imply is that the policy seems completely ineffective in the most unaffordable areas of the country, where the most productive and desirable jobs tend to be concentrated and more housing is most desperately needed, but where young would-be buyers are now in some sense more ‘priced out’. The policy only works in more remote areas where it is easier to build but where there are few job opportunities. The consequence is that not only is there a mismatch between local housing supply and local job opportunities, but also, desperate young buyers have to commute ever longer distances (often leapfrogging Green Belts) to get to their jobs.

**Effects of Help to Buy on other outcomes (inequality, systemic risks, homeownership)**

But Help to Buy is not only a largely ineffective and ‘unsustainable’ policy, paradoxically, it also further increases inequality. This is partly because the policy pushes up house prices further in already unaffordable areas, thus benefiting longstanding and typically wealthy home owners in these areas as well as owners of undeveloped land. Partly it is because, as the study by Carozzi et al (2019) also shows, the policy helped to push up the profits of developers registered in the Help to Buy business.

Moreover, the scheme may have created a systemic risk in that the government (that is, the taxpayer) assumes most of the risks, with the remaining risk being assumed by marginal – typically financially vulnerable – homebuyers (that is, those who could not obtain loans in the absence of the scheme).

We do not have any direct evidence of Help to Buy on homeownership due to data limitations. However, evidence from the United States (Hilber and Turner, 2014) suggests that there is only a very weak link at best between mortgage subsidies and homeownership rates. In fact, in local markets which were tightly regulated, the subsidies in the US had a negative effect on homeownership because the price effect – through increased demand – more than offsets the

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9 Likely this is because the government’s equity loan does not only represent a subsidy for (most) buyers, but additionally relaxes credit and liquidity constraints. The latter may explain why the subsidy is more than fully capitalized into higher house prices.

10 This mismatch between housing supply and job opportunities is further exacerbated by the rigidity of the British planning system. Cheshire et al (2018) show that tight local planning constraints cause local housing vacancy rates and commuting distances (i.e., the distance between an individual’s place of residence and her or his job location) to increase.
income effect from the tax deduction. In less regulated markets, subsidies do have a positive effect on homeownership rates, but only for higher income groups.

Reforms for failed property taxes

The trouble with the council tax

One key cause of the lack of residential construction in the UK is the fact that local authorities have virtually no fiscal incentives to permit development. In many countries where planning decisions are taken at the local level, local property and especially local income taxes provide strong incentives to local authorities to permit development (Hilber and Schöni 2016). The only local tax in the UK is the council tax. One key flaw of this tax is the fact that there hasn’t been a revaluation since 1992 – postponed by successive governments as being politically too difficult.

This has had two consequences:

- The tax has become increasingly regressive at the top end because of the effective capping of the top rate of tax.
- It bears little relation to underlying property values. Moreover, it has little weight in the tax system compared with other countries (and compared with what it would be under an efficient tax system – see Mirrlees et al, 2011).11

In addition, the equalisation system, which redistributes revenues on what is called a ‘needs’ basis, more or less eliminates any revenue gain in the medium term for local authorities that permit more development relative to those that are more restrictive.

Thus, the council tax in combination with funds to local authorities being allocated primarily on the basis to formulae, defended on the grounds that funds follow needs, provides no effective incentives to local authorities to permit development. The lack of incentives coupled with NIMBY behaviour (facilitated by politicised decision-making in the UK’s planning system) contributes substantially to the housing shortage.

The trouble with the stamp duty

In 2014, the then government eliminated a longstanding anomaly of the Stamp Duty Land Tax (SDLT). Under the old rules, homebuyers had to pay the tax at a single rate on the entire property price leading to large discontinuous jumps in the tax at threshold property prices. For example, a house sold for £250,000 implied a tax liability of £2,500, whereas a house sold for £250,001 implied a liability of £7,500.

Under the new rules, homebuyers only pay the rate of tax on the part of the property price within each tax band – like the income tax. While this reform has been a step in the right direction, it does not address the fundamental problem of the SDLT, namely that it creates a disincentive for people to move house, which has adverse consequences for the functioning of housing and labour markets (Mirrlees et al, 2011).

11 Another issue with the Council Tax is that it varies hugely across regions and local authorities and depends on which political party is in power locally. To the extent that the Council Tax does provide any incentive to permit development, this further distorts the signals as to where new housing ought to be added.
Research strongly suggests that the adverse effects of the SDLT on housing transactions and household mobility are very large. Whereas Besley et al (2014) find that the 2008-09 stamp duty holiday temporarily increased transactions by 8%, Best and Kleven (2015) estimate the effect of the elimination of the tax on the transaction volume to be 20% in the short run. Hilber and Lyytikäinen (2017a) find that the increase in stamp duty from 1% to 3% at the cut-off of £250,000 reduces the annual rate of mobility by 2 to 3 percentage points or about 30%. This adverse effect is confined to short-distance and non-job-related moves, suggesting a more powerful distortion in the housing than the labour market: the stamp duty discourages downsizing and makes it more difficult for young families to expand their housing consumption.\(^{12}\)

The stamp duty has been subjected to two other, more recent, reforms. The first is the introduction in 2015 of a stamp duty surcharge of 3% over the standard rate on second homes. This reform is likely to have induced an immediate (one-time) price reduction but has otherwise no incentive effect on second home owners to use their property more intensively (see also Hilber, 2018, and Hilber and Schöni, 2018). In fact, in contrast to a proper property or land value tax, the stamp duty encourages second home investors to hold their property for a longer time period, as the tax only applies at the point of sale. The second reform is the exemption in 2017 of first-time buyers from the stamp duty up to a value of £500,000. The trouble with it is that the effect of the exemption, similar to Help to Buy, is likely to push up house prices further, especially of small (entry-level) homes in tightly supply constrained areas like London, Oxford or Cambridge. This is because the exemption specifically stimulates demand for entry-level housing in those areas.

The key conclusion of all this is that the SDLT is highly inefficient. Some of the recent reforms to SDLT have been sensible (the 2014 reform), others less so (those of 2015 and 2017), but in any case, they do not address the crucial issue of the tax, namely that it constrains household mobility and thereby discourages downsizing by the elderly and upsizing by expanding young families.

Our above reasoning suggests that both the Council Tax and the SDLT are inefficient and further exacerbate the housing affordability crisis. They fail to provide incentives to build more houses and create mismatches in the housing market, further aggravating the housing shortage especially for young expanding families. So, what would be a better alternative?

One proposal, suggested by one of us\(^{13}\), would be to phase out the SDLT and replace the current Council Tax with a proper local property tax—an annual local tax on the actual house value.\(^{14}\) This could be achieved in a revenue neutral fashion and in two steps. In a first step, the Council Tax is replaced with a local tax on property values, with property values automatically revalued on an annual basis, based on location-specific price changes.

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\(^{12}\) See also Hilber (2017b) for a summary.

\(^{13}\) Hilber (2016).

\(^{14}\) An even better alternative might be a local Land Value Tax (LVT). This has the advantage that it cannot be avoided, is non-distortionary, provides an incentive not to sit on more land than is wanted and deters speculative land holding. One difficulty that may explain why the tax is not more widespread is that it is tricky to accurately assess the value of land, especially in areas where there are very few land transactions and most land is already built on. However, statistical estimation using hedonic methods could resolve the valuation issue and there are successful examples, e.g., in Denmark (see https://www.ft.com/content/392c33a6-211f-11e3-8aff-00144feab7de).
In a second step, the SDLT would be phased out over several years\textsuperscript{15}, while at the same time, the weight of the local property tax in the tax system is gradually increased to maintain revenue neutrality. Local authorities can use the resulting tax revenue to provide and improve local services and infrastructure. It is important that such a reform would also ensure that development-induced increases in the tax revenue base are not equalised away through the central government grant system.\textsuperscript{16} Thus, local authorities that are generous in permitting residential development will be able to permanently generate additional resources and will no longer be penalised.

Such a reform has three key advantages over the current system of property taxation:

- First, the newly created local property tax does not affect the decision to move and thus does not distort housing and labour markets.
- Second, such as tax provides stronger incentives to use land or properties more intensively and not to let property stay vacant.
- Third, annual local taxes on the value of property provide greater incentives to permit development (additional tax revenue for the local authority and local taxpayers).

Phasing out the stamp duty and phasing in a proper local property (or land) value tax (that could still be called ‘council tax’) may not on its own solve the housing affordability crisis, but it would be an important step in the right direction.

**Supply-side reforms**

Our analysis has, in our judgement, rightly highlighted the pitfalls of existing and proposed housing policies, mainly on the demand side. Following the logic of the evidence, reforms to have a real impact should focus on the supply side and, in particular, on reforms of the tax system (briefly discussed above) and the planning system.

One obvious reform would be to abandon the almost entirely discretionary mechanisms of decision-making the British planning system clings to. Both whether a proposed development will be approved and what ‘Planning Obligations’\textsuperscript{17} to impose as a condition of approval, are entirely discretionary. This is highly damaging because it injects uncertainty into the development process. Development is already a risky business because it has to be based on estimated future costs and revenues but increasing uncertainty increases risk, so requires a higher return – a bigger risk premium. In turn that means a proportion of development ceases to be viable, so less gets built. It is also reasonable to argue that Planning Obligations, in particular, are one of the factors which have increased the monopolisation of development over the last 30 years. They, like the complexity of navigating our planning system, act as barriers to entry.

\textsuperscript{15} Phasing out the SDLT over several years, rather than in one go, slows down and reduces redistribution that is inevitable when reforming the tax system. Abolishing the SDLT in one go may lead to unacceptable levels of redistribution e.g. between those who have just bought a house and those who will by a house after a radical tax reform.

\textsuperscript{16} Helping the disadvantaged and equalisation based on ‘needs’ is important, but it should be done at the individual level rather than via trying to address ‘local need’. This is important because LSE research (Hilber et al 2011) has shown that central government grants are essentially fully capitalised into property values, thus help home owners and landlords rather than the poorest and most disadvantaged who typically rent.

\textsuperscript{17} Section 106 Agreements now mainly to provide allegedly affordable housing as a quid pro quo for getting permission.
The Master Planning system of Continental Europe and, to a lesser extent, the Zoning system of the US, lead to clear-cut and predictable decisions. The plan, once democratically adopted by the local community, defines what developers can do. This may be parcel by parcel or it may be framed in terms of rules applying to large zones. Either way the extra risk premium our discretionary system imposes is avoided and, since ‘rule-based’ systems are less complex, barriers to entry are lower. Another significant source of uncertainty and barrier to entry could be eliminated by replacing the existing discretionary, bargained ‘Planning Obligations’ with a transparent tax, levied on the realised sales value of all new development. This would be a far more efficient mechanism for extracting value increase resulting from planning approval.18

Any reforms to increase land supply should take into account problems of market failure endemic in land markets because of both their contribution to land-derived public goods, such as open space, and problems of external costs stemming from the reality that the value of every parcel of land is influenced by activities on neighbouring parcels. Unregulated markets would not supply enough land for urban open space, recreation, wild life habitats, National Parks, Areas of Outstanding Natural Beauty, and historic districts in cities or heritage buildings. There is a strong case for safeguarding such land. However Green Belts not only cover about 1.4 times as much land as all urban areas – the London Green Belt stretches from the North Sea to the edge of Aylesbury and covers 22 percent the area of the GLA itself – but they do not protect land on the basis of its social or environmental value. They exist uniquely to prevent development: in the jargon to ‘prevent settlements merging’.

There have been several proposals over the past five years to release some low amenity value Green Belt land19 close to stations. In practical terms, this would imply re-designating some land that is in high intensity agricultural use or perhaps used for private golf courses or derelict and near current or planned transport routes or access points.

One of us published a more detailed report (Cheshire and Buyuklieva, 2019) showing how, if rigid planning rules were relaxed, some 2 million new homes could be built close to train stations serving major employment centres at no cost to government at all and at considerable gain to the local communities where they were built. This did two things. The first was to identify how much environmentally valueless land there was within 800 metres of ‘commuter stations’ – defined as providing a service to the major employment centre within 45 minutes. The second was to suggest specific measures designed to realign incentives so that local communities would welcome new development, the scope for NIMBYism would be much reduced, developers would invest in rail-based development with low carbon footprints, land value uplift would be diverted to fund both social housing and need local infrastructure as well as support commuter rail services. At the same time people could commute shorter distances and be able to access well paid, productive jobs.

In brief the proposal was that the owners of the stations (like Transport for London or Network Rail) should set up development companies run on commercial criteria and that these new

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18 The value increase is very large indeed and represents an extraordinary price distortion revealing how severely land for housing is restricted at present. According to https://www.gov.uk/government/publications/land-value-estimates-for-policy-appraisal-2017 in the absence of planning obligations, land for housing is commonly worth £3 to £7 million per hectare in southern England and, on the northern fringes of London, £17 to £25 million. This compares with an agricultural price of some £20,000: so up to a 1,000 fold increase in price.

development companies should be given the sole right to develop all the land identified as ‘buildable’ within 800 metres of commuter stations. As sole buyers they could buy land cheaply – for not much more than agricultural prices instead of the £3.5 million a hectare minimum that currently has to be paid for housing land anywhere in southern England. If developing the land around stations was incentivised by tapering off subsidies to commuter rail and co-ordinated by a newly created Development Corporation (along the lines of New Town Development Corporations created to address the housing crisis of the 1950s), it would ensure the land was built out speedily but according to rail capacity. At the same time the Development Corporation could ensure the new homes were built out in rail and cycle friendly fashion so current car-oriented developments were replaced by low carbon, rail-oriented ones.

In addition, it was proposed that current and extraordinarily inefficient negotiated Planning Obligations (Section 106 Agreements) and the Community Infrastructure Levy would be abolished for this land and replaced by a transparent tax on the sale price of all the new construction. This would produce proper funding to pay for enhanced services and infrastructure for the local communities receiving the development – place-making infrastructure – and proper funding for truly affordable housing in the social sector. Aside from some financing to bridge cost and revenue flows, government would not have to pay a penny. All this could be funded from land value uplift.

The difficulty would be a political one. The policy would allow building on Green Belt land – but only so long as that land had no environmental or amenity value. There is a remarkable quantity of such land. A worked example for five city-regions, Birmingham, Bristol, London, Manchester and Newcastle revealed 47,000 hectares of ‘buildable land’. Reserving 10% for new publicly accessible green space and wild life habitat still provided enough land to accommodate 2 million additional homes – 15-years of building at recent rates. If the new development levy was set at 20% it would produce some £100 billion of revenue over time to pay for the place-building infrastructure and new social housing.

In the longer term, one could revert to protecting all land only on the basis of its environmental or amenity value taking account of infrastructure costs and the carbon footprint of development. This could be done by increasing the areas of outstanding natural beauty so that there were substantial green spaces within reach of all major cities (‘green fingers’ more than ‘green belts’), retaining all habitat or national park protection but using land price differentials as price signals to let planners know where or when land would be more usefully transferred to some other use.

If the price of land, if it were developed in some alternative use, exceeded its value in its current use by more than some fixed amount (a ‘threshold’ acting largely as a greenfield development tax) and it could be shown that that price differential was not justified by the environmental or amenity benefits associated with the land in its present use, then there would be a presumption in favour of development (Cheshire and Sheppard, 2005). In fact, the Guidance to the National Planning Policy Framework (NPPF) issued in 2019 incorporates something close to this idea as an affordability formula to gauge demand to guide where to release land locally for housing.

Other supply-side reforms could work via altering fiscal incentives at the local level as discussed in the section dealing with tax reforms above. These are ‘supply-side’ measures since they could greatly reduce the existing incentive for local communities to prevent
development.\textsuperscript{20} The 2010 coalition government made tentative moves in this direction with the New Homes Bonus but this was ineffective since the fiscal incentive was only temporary (for three years) and was far too timid to offset the local authority’s costs associated with residential development.

More fundamental reforms would be necessary to provide sufficient incentives to local authorities to change their ways. In an ideal world, this would work via replacing the council tax and the stamp duty land tax with a proper annual local property tax, ideally based on land values, with automatic annual revaluation based on neighbourhood specific price changes. This could be designed to be revenue neutral. Such a reform is politically difficult but it would help to address various housing-related issues in one go. To this could be added the Land Development Charge (LDC), mentioned above, charged on the sale value of all new development and replacing both Planning Obligations and the Community Infrastructure Levy (an arbitrary tax on development imposed by only a minority of Local Authorities with no safeguards that revenues are applied to providing ‘community infrastructure’). Proceeds from the LDC would go to Local Authorities and be ring-fenced from funding equalisation. Local Authorities in turn would be required to spend the revenues on supporting infrastructure and transparently funded social housing. One advantage of the LDC, apart from its transparency and predictability is that its cost would be negatively capitalised into land prices.

\textbf{Conclusions}

The evidence shows there really is a crisis of housing affordability and the effects of this crisis are spreading far beyond just housing. They are severely handicapping economic productivity, reducing social welfare and having a severely detrimental impact on the distribution of wealth both between the young and the old and between the high price regions of the south and the low price regions of the north. Housing may be affordable in our declining local economies but that often traps people in hopelessness.

Empirical research points clearly to the UK’s rigid planning system as the main cause of the housing affordability crisis. Demand-side policies such as Help-to-Buy don’t work in this setting because they merely increase house prices.

The current property-related taxes are inefficient, especially the council tax and the stamp duty. The former is regressive and does not provide sufficient incentives to permit development at the local level, the latter hampers household mobility and generates distortions in the housing markets. Importantly, it discourages downsizing of the elderly and impedes the upsizing of expanding young families.

This Election Analysis presents a set of more supply-side friendly policies. The obstacles to moving to such policies must not be underestimated since they are likely to antagonise vested interests and would change the structure and distribution of financial assets. But the long-run

\textsuperscript{20} That disincentives restrict supply was shown in Cheshire and Hilber (2008). Even the change from locally administered Business Rates to the central government Uniform Business Rate in 1990 had a significant disincentive effect on the willingness of local authorities to allow office development and, as a direct result, over time increased costs of office space more than any conceivable level of the previous local Business Rates. This was a small change in incentives since, because of the policy of funding local expenditures largely on the basis of a needs-based formula, there was already a minimal real incentive from local Business Rates. Over the medium term extra revenues from a higher local rate of tax would be dissipated. All the Uniform Business Rate did was to make this lack of incentive transparent and immediate. The revenues never passed through local hands at all.
consequences of just symbolic action and promises which cannot be implemented are likely ultimately to prove socially explosive and economically traumatic.

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**Further reading**


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A series of background briefings on the policy issues in the December 2019 UK General Election

Energy and Climate Change

Ralf Martin
Petra Sarapatkova
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#GE2019Economists
UK greenhouse gas (GHG) emissions are declining. The UK has a framework of long-term targets, which aim to reduce net emissions to zero by 2050 in line with what is needed on a global scale to prevent the most severe forms of climate change. There are concerns about the country’s ability to reach the targets.

A key factor causing lower emissions growth over the last ten years has been the drop in output and slow catch-up that occurred in the wake of the global financial crisis.

While this was helpful for climate change in the short run, the trend will reverse if growth picks up and this will make emissions reduction harder in the long run, unless concerted action is taken to make the transition towards a clean economy.

The evolution of UK climate change policy is also in danger from Brexit: while slower growth resulting from leaving the EU may help with emissions in the short run, at the same time reduced investment in pro-environment research and development (R&D) and infrastructure is likely to result in emissions being higher in the long run. With much of UK climate policy derived from EU policy there is also the risk of policy dilution post Brexit.

To meet the long-term targets, further action is needed to commit more resources to renewable energy deployment as well as R&D.

Residential energy use should also be tackled by providing the right incentives to move to gas-free options while ensuring that the poorest households are not unduly burdened.
Introduction

UK greenhouse gas (GHG) emissions are declining and have been declining for some time. As of 2018, the UK emitted 449 million tonnes of CO2 equivalent (tCO2e).1 That corresponds to a reduction of 43% relative to 1990 levels, which should make it easy to meet the 2020 target of a reduction of 37%.

Moreover, the UK has a framework of long-run targets developed by the Committee on Climate Change, an independent body of experts advising government. At present, this requires a reduction of 51% by 2025 and 57% by 2030. In addition, shortly before resigning as prime minister, Theresa May introduced a so-called ‘net zero’ target, requiring a reduction of emissions to (net) zero by 2050.2

So far, so good. Despite this, things are far from well when it comes to climate change in the UK. There are concerns about the country’s ability to reach the 2050 target.

First, a key factor accounting for lower emissions growth over the last ten years has been the drop in output and slow catch-up in the wake of the global financial crisis. As Figure 1 illustrates, it is most likely that the UK would have missed a 2012 emissions target requiring a reduction by 12.5% of 1990 levels3 (as part of the UK’s Kyoto Protocol obligations) if it were not for the growth slowdown.

Second, even without further recovery and an additional helping hand in the form of slower growth due to Brexit, it is unlikely that the future carbon targets will be met. For example, in Figure 1, consider a growth path that leads to no recovery and a 7% reduction in GDP by 2033. This lies in the mid-range of the government’s own forecasts about the impact of Brexit, which suggests a reduction of between 5% and 9%. This would just about bring the UK to a 57% reduction by 2030 (in line with the government’s target). By 2050, we would see a reduction of 74%, which is quite a long way from the government’s (net) zero target, implying a 100% reduction by that date.

These concerns raise at least two potential questions: What needs to be done and how meaningful are the targets in the first place? Each will be addressed in turn.

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1 CO2e is a standard unit for measuring various greenhouse gases combined. The idea is to express the impact of each different greenhouse gas in terms of the amount of CO2 that would create the same amount of warming.
2 The ‘net’ refers to the fact that emissions can be reduced either by reducing actual emissions or by increasing atmospheric CO2 depletion by planting trees, for example.
3 Because United Nations efforts to curb emissions started in the early 1990s, much of policy and debate on GHGs is formulated relative to a 1990s base year.
What to do?

To understand what is required, it is useful to look at the main sources of GHG emissions. Figure 2 shows that most (83%) emissions are from CO2, which mostly come from transport, energy supply, residential and business. To reduce emissions dramatically, we need to:

i) Stop generating electricity from gas (coal is no longer relevant in the UK).
ii) Stop heating our homes with gas.
iii) Buy more electric cars, trucks and buses (use more public transport).
iv) Plant trees.

Crucially, ii) and iii) make sense only if i) is achieved. In principle, the UK is in pole position for renewable energy generation, particularly from offshore wind (but also tidal as well as other ocean technologies). According to a new report by the IEA (2019, see also Figure 3) the global potential for offshore wind alone is several times larger than current world electricity demand, and much of that potential is located in UK waters.

But the UK has been slow to adopt renewable electricity generation, particularly compared with European neighbours such as Denmark or Germany. The reason is simply lack of political will. Government support for renewable energy amounts to tens of billions of euros annually.
in Germany (for example, nearly €20 billion in 2014 alone), whereas in the UK, support amounts to a total of about £6 billion via the government’s current ‘contract for difference’ (CFD) scheme and legacy payments from its predecessor, the ‘renewable obligation’ scheme.\(^4\)

Notwithstanding this, the UK is now home to the biggest stock of offshore wind power and is rapidly catching up in terms of the share of electricity produced from renewable power (Figure 4a). But considering the long-run target and the rather low levels of support by international comparison, any future government will need to increase the levels of support available via a support scheme such as CFD.

It also might be necessary to change how this scheme is funded. Currently, the funding comes from all electricity customers via the so-called ‘supplier obligation’. But this implicitly means that emissions from electricity are priced higher than emissions from (domestic) gas usage, which creates perverse incentives. An improvement would be to impose the supplier obligation on both electricity and gas customers.

Figure 4b shows slow progress in the UK adoption of electric cars.\(^6\) That said, the UK now has a long-run target to phase out all fossil-fuel-based cars by 2032. Increasingly, there are restrictions on ‘dirty’ cars at the city level. It is therefore plausible that these figures will improve in the near future.

Residential heating is another area where emissions have been persistent for a long time (see Figure 5) despite recent government subsidy schemes for insulation or heating upgrades. But what has consistently been avoided by governments of all colours are strong sticks in addition to carrots; for example, the levying of some form of carbon tax on private households, in particular on residential gas consumption.

The reason for this is clear: governments are worried about the political backlash of such a highly regressive levy (as heating costs amount to a larger fraction of the total income of poorer households). By contrast, residential electricity is implicitly taxed because electricity suppliers are part of the European Union’s Emissions Trading System (EU ETS) and because households have to bear the costs of the CFD scheme. Hence, this creates an incentive not to invest in electric heating infrastructure, such as heat pumps.

But it is exactly this kind of infrastructure that is needed to meet the long-term net zero targets. Hence, to avoid such perverse incentives, it would be desirable to ensure that the carbon in residential energy is priced as well by a carbon tax or similar. To avoid a negative impact on


\(^5\) For example, payments under the CFD scheme amounted to about £700 million in 2018. Legacy payments under the ROC scheme amounted to £5 billion. The CFD guarantees carbon-free energy producers guaranteed price for their electricity. If the market price is lower than the guaranteed price, the government provides a subsidy that makes up the difference, if it is higher then firms have to pay back the difference. The so-called strike price is determined in a reverse auction; that is, suppliers will offer a certain capacity of renewable power for a certain strike price. The company that offers the lowest price (subject to other criteria) will win the contract. The scheme is funded via the Supplier Obligation; that is, a kind of tax on electricity firms.

\(^6\) This is in spite of the government’s rather generous ‘Plug in car grant’ support scheme (first started in 2011).
fuel poverty and a public backlash more widely, this could be done by a revenue-neutral rebate scheme – that is, the money raised is paid back to households.

Even if this were to be done on a lump-sum basis (that is, everybody gets the same) this will be a progressive tax because poorer household consume less gas in absolute terms (even though this accounts to a larger fraction of overall spending). If done right, it could, in addition, lead to support for rather than opposition to climate policies.

The Labour Party has been most vocal about funding emission-reducing home improvements as part of its election pledges. Combining this with an incentive scheme as outlined would allow the same benefits to be delivered at lower cost.

Figure 2: UK greenhouse gas (GHG) emissions and projections

Notes: The figure reports percentage shares in total 2018 emissions by the UK, which were 448 MtCO2e. ‘Public’ corresponds to public sector emissions (for example heating government buildings). ‘Land Use’ refers to forests and vegetation that converts CO2 back into its components. Non-CO2 GHGs include methane and nitrous oxide emissions that primarily arise in farming.

Source: Authors’ calculations based on BEIS data.

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7 Even without a change in behaviour, a £50 charge per tonne of CO2 would imply about £120 in extra cost for the average household. For the poorest households, this would only be about £90 because of their lower overall consumption – hence, a £30 net gain.

8 For example, the government should start paying the lump-sum benefits before the tax rates are increased and make the rebate highly visible to recipients. A scheme along those lines has been implemented in British Columbia since 2008 and it has proven to be highly effective as well as popular (see Lacroix and Richards, 2015).

Figure 3: The potential of offshore wind

![Offshore wind capacity by country](chart.png)

Source: IEA.

Figure 4: Adoption of clean technologies

(a) Share of electricity from renewables

(b) Share of electric vehicles

Source: Eurostat

What’s the point of ‘net zero’?

While the net zero pledge was certainly an attention-grabbing policy move, it is possible to question its rationale without being a climate change denier. Figure 5 illustrates one issue. More than most countries, the UK is good at avoiding emissions at home while pushing up emissions abroad through the goods that we consume.

For example, in 2007, this amounted to 447 MtCO2e, while emissions associated with goods produced and consumed in the UK amounted to only 395 MtCO2e. Things improved a bit in 2016 when emissions embedded in imported goods reduced to 355 MtCO2. But the UK still imports 43% more emissions than in 1997.
What’s more, even if the UK managed to reduce both consumption and production emissions to zero, this would have very little effect on the actual climate, unless most other countries followed suit. One important channel in which the UK can affect what happens in other countries is by pushing the knowledge frontier on clean technologies and practices.

Figure 6 shows the share of clean, dirty and grey technology in total innovation activity (measured using patent filings) over time globally, as well as for clean innovation by country.$^{10}$ There are two important features. First, after a dramatic explosion in clean (and grey) technology from 2000 to 2010, there has been a dramatic collapse across both technologies and countries.

Second, the UK is a laggard when it comes to both clean car and clean energy technology. Moreover, like other countries, the UK follows the dynamic of boom and bust of clean technology innovation.

What is driving this dynamic? This is an area of continuing research. But one potentially relevant factor is government spending on R&D. After sharp increases in spending between 2000 and 2010, government spending on energy, and renewable energy in particular, flatlined or even decreased in many countries after 2010 (see Figure 6).

Overall, government spending on energy R&D in the UK improved somewhat after 2015. But this was primarily due to increases in spending on nuclear technology and energy efficiency. Spending on renewable energy technology remains low in the UK by international standards (see Figure 7). Overall spending on energy technology also remains low by historic standards. The UK (along with most other countries) spent substantially more on energy research during

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$^{10}$ Clean refers to non-fossil fuel-based technologies, dirty to fossil fuel-based tech and grey to technologies that make fossil fuel technologies less polluting.
the oil crisis of the late 1970s and early 1980s; for example, as Figure 7 shows, the share was nearly 0.1% of GDP in 1980 compared with less than 0.05% in 2018.

So what led to the decline in spending after 2010? A plausible factor is the strain on government budgets following the global financial crisis. This could well be a case study for what is going to happen to the UK policy-making in this area if Brexit goes ahead with further slow growth and pressure on government revenues in turn.

Recent CEP research has also suggested that the drop in clean energy innovation could, in part, be driven by the discovery of shale gas, which redirected energy R&D resources. This would have a similar effect to that of a recession in terms of the impact on emissions: a short-term respite if energy production moves from dirtier fuels such as coal to shale gas, but more emissions or more costly emissions reduction in the future due to the delayed investments in fully clean alternatives due to the strong path dependency of technological progress (Acemoglu et al, 2019; Aghion et al, 2016; Acemoglu et al, 2012). In this context, the suspension of fracking is very welcome and should be made permanent.

Figure 6: Clean versus dirty innovation

Note: Clean refers to non-fossil-fuel-based technologies. Dirty are fossil-fuel-based technologies. Grey are technologies aiming to make fossil-fuel technologies less polluting and more efficient.

Source: Authors’ calculations based on PATSTAT data.
Figure 7: Government R&D spending on various energy technologies as share of GDP

Source: Authors’ calculations based on IEA data.
Climate policy as growth policy

One reason why politicians sometimes get excited about clean technologies is the hope that they will not only help to solve climate change but also contribute to economic growth. But this depends on which green technologies we are talking about as well as on which technologies receive less funding due to an increase in funding to clean technologies.

What matters here are the knowledge spillovers from different technologies, as well as the response of different sectors to public R&D support. In a recent study (Rydge et al, 2018), we examine this taking account of both direct and indirect knowledge spillovers. Figure 9a shows estimates of social returns to government R&D spending that can be achieved in different technology areas. We see that for the UK, clean technologies – in particular, clean energy technologies – are high up the ranking, with returns of more than 7% on average. Only Biotech, Pharma and Instruments achieve higher returns than clean energy technologies.

This would suggest that directing more government resources towards clean energy technologies would be growth-enhancing as well as helping to address climate change. By contrast, clean car technologies are among the technologies with the lowest return (less than 5%).

In Figure 9b, we also report how the UK is specialised in various innovations fields relative to other countries. This reveals that at present UK is not overly specialised in clean energy technologies.
Brexit and climate change

There are also risks emerging from Brexit that go beyond reduced investment in clean R&D and infrastructure due to budget pressures. At present, large parts of UK climate policies are underpinned by EU regulation and it is not at all clear what will happen to policy design and stringency after Brexit.

For example, the EU ETS regulates and puts a price on nearly 50% of European as well as UK CO2 emissions from power plants, industry and aviation. The EU ETS has its shortcomings, but there is good evidence that it has reduced emissions and provided incentives for clean innovation.\textsuperscript{11}

In principle, the UK could remain part of the EU ETS as do other non-EU countries (for example Norway and Switzerland). But the government has now proposed instead to introduce a carbon tax for firms previously regulated by the EU ETS.\textsuperscript{12} It is not clear yet how the tax level is going to be set. In principle it could be lower, higher or exactly equal to the EU ETS price.

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\textsuperscript{11} See, for example, Dechezlepretre and Calel (2016), Martin et al (2014), Martin et al (2016).

\textsuperscript{12} https://www.gov.uk/government/publications/meeting-climate-change-requirements-if-theres-no-brexit-deal/meeting-climate-change-requirements-if-theres-no-brexit-deal#actions-euets
But even a UK government committed to climate policy would find it hard to set a level higher than the EU ETS as it would endanger the competitiveness of firms relative to European firms at a time when they are already struggling due to Brexit. On the other hand, a government not committed to climate policy would find it easy to set a lower level or abolish the measure entirely.

There is also a risk that European climate policy overall becomes weaker after Brexit. The UK has been a driver of climate policy within the EU, particularly as a champion of market-based approaches to regulation such as the EU ETS. Taking this influence away raises concerns about the quality of future policy design and implementation.

Conclusion

Despite little government attention devoted to climate policy in recent years, there has been some progress. Notably, clean energy generation has been increasing on the back of a dramatic expansion of offshore wind power.

The net zero emissions target introduced by Theresa May at the end of her premiership was a symbolic milestone that needs to be backed up with a ramping-up of policies to support renewable deployment and research in clean technologies as well further incentives to reduce emissions (particularly in the domestic gas sector).

In doing so, UK policy-makers need to keep in mind that the policy objective must be to reduce global emissions. The UK can contribute to that most effectively by helping to develop, pilot and improve technology that will make a transition to clean technology the economically rational thing to do, even when not taking account of the potential damage from climate change.

By embedding support for clean technology in a wider industrial strategy and focusing on areas where social returns are highest, such a strategy can also contribute to more economic growth in the short run.

By reducing growth, Brexit may offer moderate respite in the short run when it comes to direct emissions in the UK. But it will make solving climate change harder in the long run if it reduces investment in pro-environment R&D and infrastructure.

There is also the risk that Brexit weakens domestic climate policy directly because much of it is based on EU rules and a UK government facing the economic challenges of Brexit might be easily tempted to compromise in this area. Moreover, the UK has historically been a force helping to advance the climate agenda within the EU and its absence in future could lead to a weakening of EU climate policy.
Further reading


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A series of background briefings on the policy issues in the December 2019 UK General Election

Health and Social Care

Michael Anderson
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#GE2019Economists
Health and Social Care

CEP ELECTION ANALYSIS

Michael Anderson, Elias Mossialos and Alistair McGuire

November 2019

Summary

• The UK National Health Service (NHS) is acknowledged to have suffered from a funding crisis since 2010.

• The UK currently spends 9.6% of GDP on healthcare (2017 figures), but this percentage is slightly lower than in previous years.

• NHS expenditure is 7.6% of GDP, which is approximately the same as it was in 2012 even though population and treatment pressures have been increasing.

• Historically, the average annual increase in NHS expenditure since it was established has been over 4%, but since 2014/5 average annual NHS expenditure growth has been 1.6% and between 2009/10 and 2014/5 it averaged a mere 1.1% per annum.

• For more than five years, hospital trusts in England have been recording financial deficits.

• As just under 70% of NHS expenditure is spent on the workforce, the low growth in funding has been achieved partly through wage freezes.

• Severe workforce shortages have emerged; currently one in 12 posts are vacant within the English NHS Hospital and Community Services sector.

• This has led to a subsequent deterioration in the quality of service provision with a number of service targets being missed; the cancer treatment target has been missed for the fifth year in a row.

• Social care, which is directly linked to NHS treatment provision, is largely provided by local authorities; adult social care funding fell by around 2% per year between 2010/11 and 2014/15, but has since grown, although it has not recovered to its 2010/11 levels.

• The underfunding of social care, at a time of increasing population pressures has led to issues of bed-blocking within the NHS

• The two major political parties are pledging NHS expenditure growth (3.3% per annum for the Conservatives; 4.3% by Labour), but are less explicit over social care reform.
Introduction

The National Health Service (NHS) is arguably the one national institution that unifies the country in terms of general public support. But there is growing concern about the long-term sustainability of the NHS, with 57% of people surveyed in a recent Ipsos MORI poll expecting deterioration in services (Ipsos Mori, 2017). It is therefore unsurprising that it has been a major source of political debate over the past few elections.

Not only has the NHS been important to politicians in eliciting voter support, related debates on social care provision have also gained in importance over time. Indeed, some would argue that the Leave campaign’s claim that Brexit would make £350 million per week available for the NHS was instrumental in the outcome of the referendum, and that the miscalculation in announcing how social care might be financed also led to the eventual downfall of the May premiership, the selection of Boris Johnston as prime minister and the subsequent call for a third UK election since May 2015. Correct or not, health and social care remain central to the political debate in the 2019 election.

The dampening of welfare expenditure since the crash of 2008, with an emphasis on public sector debt reduction has meant that public sector expenditure levels generally, and NHS and social care expenditure specifically, have become a major focus for all the political parties in this election.

At the same time, as various markers of NHS performance, such as A&E and cancer waiting times decline, the election has triggered debate about whether NHS service provision is deteriorating. The House of Lords Select Committee on the Long-term Sustainability of the NHS and Adult Social Care, in reviewing the health and social care sector, began by stating ‘the NHS… is in crisis and the adult social care system is on the brink of collapse’ (House of Lords, 2017).

The structure of the NHS in the UK

The National Health Service in fact provides for the four, individual constituent countries of the UK in different ways. Reforms to the NHS in England in the 1990s had introduced an internal market structured around a purchaser-provider split, where GPs held budgets (based largely on the size of the population they served, weight adjusted for illness and deprivation in the geographical area) to provide primary care services and purchase secondary (hospital) and tertiary (specialist) healthcare.

In England the Health and Social Care Act (2012) built on these reforms, retaining a purchaser-provider split, but now based on approximately 200 clinical commissioning groups (CCGs) purchasing care from hospitals and specialist providers on behalf of the populations they cover. The Act allowed purchase of such care from any willing provider, including the private sector, and included the requirement to put certain contracts out to tender to promote competition. In essence, money follows the patient in terms of their health treatments.

In April 2019, an organisational reform aimed to become more response to regional needs, with the separate bodies of NHS England and (NHS) Improvement merging to manage the NHS in England, based around seven regions. Regulation is maintained through a number of bodies, with the Care Quality Commission (CQC) covering general quality of provision and safety, while the National Institute for Health and Care Excellence (NICE) provides evidence on the clinical effectiveness and cost-effectiveness of individual treatment provision.
Social care provision is provided through local authorities, with some limited cross-sectoral funding. One exception is the current experiment being undertaken in Greater Manchester, where health and social care operates through a strategic board and a combined budget. It is too early to assess the impact of this experiment, although doubts have been raised as to whether it is possible to replicate it across other regions of England (Harker, 2019).

While England still operates a regulated internal market, the general direction of current policy aims to resolve any barriers that are created through these financial flows, with an indication that the promotion of integration across services will be emphasised. Such integration broadly characterises the NHS funding and provision delivery in the other parts of the UK. In Scotland, Wales and Northern Ireland, NHS funding is centrally held and allocated to regional health boards and specialist boards to provide healthcare within a given budget. To a degree, social care provision is also integrated with healthcare provision in these countries.

There has been remarkably little comparison or assessment of the efficiency of these different systems of funding and delivery across the UK. What little analysis has been undertaken finds no consistent evidence that one structure is better in the delivery of healthcare than any other. A common suggested reason for this is that the smaller countries face different health needs, although even here the evidence is not straightforward.

**Expenditure on UK health and social care**

Total (public and private) UK healthcare spending was last calculated for 2017 and estimated to be £197.4 billion (ONS, 2019). At that point, the NHS and local authorities contributed 79% of the total spending, out-of-pocket expenditure was 16% of the total (and given that prescription charges have been abolished in Scotland and Wales, and dental charges are lower in these countries, most of this was incurred within England), private health insurance was around 3% of the total and the rest was essentially charitable spending.

Public expenditure on health was £155.6 billion in 2017, accounting for 7.6% of GDP, which is approximately the same as in 2012 (7.7%) (ONS, 2014). Since that time, the NHS has experienced the lowest expenditure growth since the initial ten years after it was established.

Historically, the average annual increase in expenditure since the NHS was introduced is just over 4%, taking account of population growth the increase in per capita expenditure is 3.6% over this period (Gershlick et al, 2019). The highest average annual expenditure growth of 6% per annum was attained over the period 1996/97 until 2009/10 (Gershlick et al, 2019). Since 2014/15 the average annual growth in healthcare expenditure has been a mere 1.6%.

Between 2009/10 and 2014/15 under the coalition government, NHS expenditure averaged 1.1% per annum. Adjustment for population growth would take the average increase in spending across the period 2009/10 to 2018/19 to less than 0.4% per person. In 2017/18, NHS expenditure was £2,168 per head in England, £2,306 in Northern Ireland, £2,310 in Wales and £2,353 per head in Scotland (Harker, 2019).

The Scottish spend per head is over 8% higher than in England. This may reflect a worse population health in Scotland than in England, but it also masks variation in expenditure within England and possibly some differences in public sector prioritisation.
Such historically low levels of spending, in conjunction with increased pressures from an aging population and general cost pressures, have led to a sustained financial crisis within the NHS. For more than five years, English NHS hospital trusts have been recording financial deficits. In 2018/19, NHS trusts overspent by £571 million and CCGs by £264 million, although these deficits were offset by short-term cost savings and emergency funding to achieve an overall NHS financial balance (Harker, 2019).
While attempting to make up for shortfalls in expenditure through efficiency improvements, it is widely recognised that there is limited further productivity gains to be made within the NHS (House of Commons, 2017). There is growing recognition that the lack of growth expenditure has meant that the NHS has failed to keep up with increasing demands arising from an aging population, failures to integrate health and social care packages and the general rising cost of healthcare delivery.

The House of Lords (2017) attributes this failure to an environment of historic low spending on the NHS, with healthcare spending per head historically ‘markedly lower than other countries such as France, Germany, Sweden and the Netherlands’ (House of Lords, 2017). The latest comparable, healthcare spending for the UK as a whole are produced by the Office of National Statistics (ONS, 2017) for 2017. Total UK spending per person in that year was £2,898, which is among the lowest of the wealthiest countries in the world; it was £3,737 for France and £4,432 per person in Germany.

In response to such criticism, the government announced a £20.5 billion increase in NHS England’s budget in June 2018 to be phased in over the five-year period to 2023/24. Given the spread of funding over these five years, this represents an average per annum increase of around 3.3% in expenditure (Gershlick et al, 2019).

While welcoming this increase in expenditure, a number of commentators, as pointed out by the House of Commons Briefing Paper on NHS Funding and Expenditure (Harker, 2019), have stated that this is the minimum required to meet increasing demands and maintain improved delivery of service. The Institute for Fiscal Studies and the Health Foundation (Johnson et al, 2018) have suggested that the top-up of 3.3% per annum, in real terms, increases in NHS to 2023/4 is only enough to ‘maintain current standards’. To improve the quality of services, addressing growing waiting lists and improve A&E performance, annual increases of at least 4% per year are needed (Johnson et al, 2018).

Two areas of expenditure are of particular interest in this election. First, a tapering mechanism that reduces tax relief on pensions for people earning over £110,000 per year, has led to over 30% of GPs and over 40% of hospital consultants either taking early retirement, reducing their hours or refusing extra shifts (Bostock, 2019; Salt H et al, 2019) Concern has been great enough for the government to promise to reform pensions taxation in this area. Currently, a deal has been struck with the NHS with £1.25 billion allocated to alleviate pension pressures, which was announced in 2018/19.

Second, there is a debate over the encroachment of the private sector within the NHS. In 2018/19, the English NHS spent £9.2 billion, or 7.3% of its expenditure, purchasing care from private providers. This is slightly less than the record amounts (£9.4 billion or 7.7% of English NHS expenditure) on private healthcare providers in 2015/6 and 2016/7 (Rowland, 2019). Some have argued that this is a significant share of NHS expenditure going to the private sector. Others have argued that, at a time of tight capacity constraints affecting diagnostic services and elective treatments, it is a necessary expenditure. Regardless of the stance it is almost 50% higher than the level seen in 2011/12.

Social care, which is inextricably linked to healthcare, is in an even worse position in terms of expenditure allocation. Inevitably this has an impact on the NHS, as some of the pressure on the healthcare sector comes from deterioration in related social services funding.

In particular, delayed hospital discharges, where hospital beds are blocked as patients are not discharged, remain high. While delayed discharges have fallen since 2017, the 2019 level of
4,478 per day remains 13% higher than that achieved in 2014 (3,3970 per day). One of the main reasons has been the failure to coordinate care across the hospital and social care sectors. For example, the number of elderly individuals awaiting defined care packages in order for them to be discharged has more than doubled over a five-year period.

One of the issues of coordination arises from the fact that social care is substantially provided for by local authorities within the UK. Integrated care is undoubtedly affected by the fact that in England, local authority expenditure fell almost 50% (49.1%) in real terms between 2010/11 and 2017/18 (Comarty, 2019). Between 2010/11 and 2018/19, adult social care expenditure fell by 2% (from £16.5 billion to £16.1 billion), having fallen every year between 2011/12 and 2015/16. Between 2009/10 and 2015/16, spending on adult social care fell 10%. Since 2016/17, adult social care expenditure has begun to rise year on year.

To alleviate the funding pressures, particularly the bed-blocking, the government created a Better Care Fund in 2015, which was meant to increase support to local authorities for adult social care by £3.5 billion, although £2 billion was a direct transfer from the NHS budget. In 2017, a further £2 billion was allocated to the Better Care Fund.

While having some impact, it was clear that progress was slow and the initial aim of achieving financial savings through better integration was not being achieved (NAO, 2018). As a result, in 2019, the government announced an additional £1 billion for local authorities adult and children’s social care services.

Even so, to cope with these financial pressures many local authorities have cut services and restricted access through raising eligibility criteria. At the same time, the quality of care delivered is of widely varying quality. It has been estimated that £12.2 billion of additional funding for social care is needed per year by 2023/24 to restore access to 2010/11 levels of service and invest in the social care workforce (The Health Foundation, 2019).

In order to address some of the financial shortfall, the government has allowed local authorities to raise an up to 3% levy on council tax, from 2017/18 to aid funding of social care (Cromarty, 2019). It is not clear how much funding has been raised by local authorities in this way, nor whether if raised it has all gone into social care; although the government is trying to ensure the levy is ringfenced for social care.

Moreover, the potential for raising up to a 3% levy for social care funding also has a direct impact on the amount of access to the Better Care Fund that a local authority has. Essentially up to 90% of the Better Care Fund is open to potential substitution by the potential to levy funds for social care, making the net additional funding less than £2 billion. A further separate £240 million was released to relieve ‘winter pressures’ in 2018/19 and 2019/20. For reasons yet to be understood, hospital discharge delays attributable to social care inadequacies have fallen by 30% in the year to June 2019 (Cromarty, 2019).

While a substantial amount of adult social care is funded through the public sector, according to Laing Buisson (2018) approximately 45% (176,000) of individuals in independent sector homes, reflecting the highest number in need, paid privately (Laing Buisson, 2018). Reform of the social care funding model is long overdue, and the eligibility criteria (means tested threshold of total assets less than £23, 250) remains unchanged since 2010/11.

The Dilnot Commission (2011) on ‘Fairer Care Funding’ suggested a lifetime cap of individual contributions of £35,000, and a means-tested threshold of £100,000 (Dilnot, 2011). The Care
Act 2014 included plans to introduce a lifetime cap of individual contributions if £72,000, but these plans have been postponed indefinitely (UK Government, 2015).

**Impact on services and staffing**

The NHS is a large employer. The NHS in England employs around 1.5 million individuals (1.1 million full-time equivalent staff) (Rolewicz and Palmer, 2019). Across the social care sector there are a further two million individuals estimated to be employed (Dolton et al, 2018), with a further 6.8 million informal carers (Bucker and Yeandle, 2015). Clearly, in voter terms alone, the NHS is significant, with health and social care accounting for approximately 13% of the UK workforce (ONS, 2019b).

Within the NHS in England, there are approximately 150,000 clinicians and 320,000 nurses (Rolewicz and Palmer, 2019). Together these groups account for approximately one third of the workforce. The second largest staffing grouping is the support to clinical staff group who are around 320,000 individuals, followed by scientific, therapeutic and technical staff, which run to approximately 140,000 individuals (Rolewicz and Palmer, 2019).

The NHS workforce is growing or, in some cases, shrinking at different rates. The section of the NHS workforce with the largest growth rate is hospital medical staff. Between 2004 and 2019, the headcount of hospital medical staff increased by 38%; within that figure the number of hospital consultants rose by 67% (Rolewicz and Palmer, 2019). This contrasts with GPs, where over the last four years the number of full-time equivalents has dropped by 1% (Rolewicz and Palmer, 2019).

Since 2010, there has only been a 1% increase in the number of NHS nurses per 1,000 population employed; between 2010 and 2018, the number of nurses employed in the English NHS per million population fell by 3%, although it has since risen. Again this masks wide variation, as since 2010, employment of acute hospital nurses per 1,000 population has grown by 7%, but employment of mental health nurses has fallen by 13% and community health nurses by 11%, while district nurses have fallen by 47% (House of Commons, 2018).

With just over half of NHS expenditure spent on staff, the budget constraints have had an impact on the NHS workforce. NHS England salaries had an annual 1% cap on pay rises between 2013 and 2017, which was preceded by a freeze on public sector pay between 2011 and 2013 (Pyper et al, 2018).

Currently, around one in 12 posts are vacant within the hospital and community services division of the NHS (Rolewicz and Palmer, 2019). But there are wide regional variations. Generally, shortages are lower in the north, running at just under 5% for hospital and community care staff in the North East of England and at close to 12% in the Thames Valley (Rolewicz and Palmer, 2019).

The greatest number of vacancies is in the nursing profession. The RCN in its response to the governmental pay review estimates a total of 40,000 nursing vacancies exist in England, while Health Education England puts the vacancy number at 36,000. The RCN notes that this is an estimate as centralised figures on vacancy rates were not available for recent years (RCN, 2018). Moreover, turnover is high, running at around 15% for the nursing profession.

There are a number of factors driving these staff shortages: the withdrawal of nursing bursaries in England, a potential Brexit and strict immigration rules are compounding the uncertainty surrounding staffing pressures. The NHS has a long history of reliance on foreign staff. In total,
around 13% of NHS staff are from non-UK countries, and 5.5% are from EU countries (Baker, 2019). This varies within professional groups: around 9% of doctors, 16% of dentists and 5% of nurses are EU nationals (Dolton et al, 2018).

It is clear that the largest potential impact on the NHS workforce will be future migration policy, rather than the impact of Brexit (assuming it occurs) per se. But it should be noted that between 2015/16 and 2017/18, the number of nursing staff joining the NMC register has dropped from around 10,000 to just under 1000 each year (NMC, 2019).

Staffing shortages are also a concern within the social care sector. In England, the overall vacancy rate is high, with vacancy rate in adult social care rising from 6% in 2012-13 to 8% in 2017-18 (Skills for Care, 2019). There is significant variation within England, with vacancy rates in parts of London above 20%. Turnover is particularly high, with a 31% turnover rate across all adult social care jobs in 2017-18, rising to 35% for care workers.

Data on the social care workforce in the other UK nations are less detailed. But a total vacancy rate across social care of 6% in Scotland (Scottish Social Services Council, 2019) and Wales (Data Cymru, 2019), suggests that workforce shortfalls are not as high as in England. Approximately a third of this staff group are on zero hours contracts, with no guaranteed income.

The average hourly pay for care workers at the beginning of 2019 was low with the median wage being £8.21, the same as the National Living Wage (NLW) set at £8.21 in April 2019. Just prior to the introduction of the 2019 NLW rate, 46% of social care workers received wages lower than this (Skills for Care, 2019b). As the NLW increases over time (as planned), a major challenge will be to reward individuals with greater experience. The pay differential between care workers with less than one year of experience and those with more than 20 years of experience is, on average, just £0.15 per hour, reflecting poor occupational potential progression or training (Ward, 2019).

Not surprisingly, with these tight expenditure constraints, the increasing demand pressures and the staffing shortages, the level of NHS service provision has been affected. The service provision targets for four-hour waits in A&E, the 18-week waiting time target to see a consultant, and the 62-day cancer treatment target were all missed in 2018/19 (Thorlby et al, 2019). The cancer treatment target has been missed for the fifth year in a row.

It is not easy and too early to assess the effect on health outcomes, and certainly attribution of declining health outcomes to declining NHS standards is not straightforward. What can be said is that the gains in life expectancy appear to have flatlined, while inequalities in life expectancy have widened. In reviewing UK outcomes for a range of conditions, Dayan et al (2018) find that the UK has poor outcomes compared with other wealthy countries for a number of cancer treatments, for stroke, heart disease and amenable mortality as well as for birth outcomes (Dayan et al, 2018). For diabetes and kidney disease, they find the UK performing well.
What the main parties are offering

The following offers a brief review of the major commitments for health and social care within each party’s manifesto, with a particular focus on funding commitments.

The Conservatives

The Conservative manifesto says that the NHS will receive an additional £34 billion per year by 2023-24 (approximately £20 billion in real terms), in line with the current five-year funding settlement announced in 2018. This increases funding for the NHS on average by 3.3% per year in real terms (The Health Foundation, 2019).

But this funding settlement only covers frontline services, and does not include budgets for Health Education England (HEE), public health and capital. As noted earlier, the Institute for Fiscal Studies and the Health Foundation estimate that annual increases of 3.3% per year are needed to maintain current standards of care and meet growing demand for health (Johnson et al, 2018). To improve the quality of services, addressing growing waiting lists and improve A&E performance, annual increases of at least 4% per year are needed (Johnson et al, 2018).

The Conservatives pledge to begin work on building new hospitals over the next 10 years, and invest in hospital upgrades and new machines to improve cancer diagnosis. But this includes £2.8 billion of funding for six hospitals to upgrade their buildings over the next five years, and £100 million of ‘seed funding’ for a further 21 hospital trusts to prepare a business case for building work to take place between 2025 and 2030, but not to start building work (UK Government, 2019).

On social care, the Conservatives have confirmed the extra £1 billion for social care announced in the most recent spending review will be regular funding provided every year. The Conservatives don’t suggest any reforms to the social care funding model within their manifesto: instead they plan to work towards building cross-party consensus on potential reforms. They do commit to providing improved financial protection, by stating any reforms must include the prerequisite that no one needing care has to sell their home to pay for it.

For the workforce, the Conservatives pledge to recruit 50,000 more nurses, and to reintroduce training bursaries, as well as 50 million extra general practice appointments a year, by recruiting 6,000 more general practitioners and 6,000 more multidisciplinary team teams such as physiotherapists and pharmacists. Given the length of time to train the workforce, this is an ambitious plan.

Labour

Labour promises to outspend the Conservatives by increasing health expenditure by 4.3% on average per year. This equates to around an additional £26 billion, in real terms, for the NHS by 2023-24. This is closer to the 4% on average, per year that the Institute for Fiscal Studies and the Health Foundation estimate the NHS needs to make improvements to the quality of services, addressing growing waiting lists and improve A&E performance (Johnson et al, 2018).

Labour also plans to reduce private provision of NHS services by repealing the Health and Social Care Act, including ending the requirement to promote competition. They further promise to guarantee real terms pay rises every year, starting with an initial 5% increase for all public sector workers.
Labour intends to invest funds in specific areas of urgent unmet need. Mental health is highlighted as a key area that is not coping with rising demand, particularly for children and young people. The manifesto includes a specific commitment to increase funding for mental health services, to reintroduce training bursaries for all nurses, midwives and allied healthcare professional courses, and to review current NHS pensions.

Labour is also promising to reverse cuts to the public health budget, and return funding to 2015/16 levels, by providing an additional £1 billion per year (The Health Foundation, 2019). They plan to abolish prescription charges, provide free hospital parking to all patients, staff and visitors, and introduce free dental checks.

On social care, Labour highlight how social care funding has fallen by £8 billion since 2010, and promise to deliver long-overdue reforms. They plan to introduce free personal care for older people, and a lifetime cap of £100,000 for personal contributions to care costs and increase the carer’s allowance for unpaid full-time carers. It has been estimated that implementing this model would add around £4.4 billion to spending in 2019/20, rising to £5 billion by 2023/24 (Gershlick et al, 2019).

**The Liberal Democrats**

The fundamental pledge by the Liberal Democrats is to halt Brexit. They argue that Brexit would have many negative consequences for the NHS and social care, by jeopardising the UK’s ability to recruit or train staff from Europe, risking delays to medicines, and less resources due to reduced long-term economic growth.

The Liberal Democrat’s would also raise £7 billion per year to alleviate pressures on social care, workforce shortages, mental health services and public health. They also promise to commit some of a wider £10 billion capital fund to invest in equipment, hospitals, community, ambulance and mental health service buildings.

On social care, the Liberal Democrats pledge to introduce a cap on lifetime contributions, but do not specify what level the cap would be set at. To deliver further reforms, they commit to establishing a cross-party convention to reach an agreement on a long-term and sustainable funding model that will promote integration between the NHS and social care.

To oversee the funding of the NHS and social care, the Liberal Democrats plan to introduce a statutory independent budget monitoring body, similar to the Office for Budget Responsibility, to report every three years on funding requirements, based on projections of demand.

**Conclusions**

It is clear that the health and social care sectors have suffered a prolonged period of expenditure constraint at a time of increasing demands from an aging population. It is also true that the austerity suffered by the NHS has been less severe than that witnessed by other parts of our remaining welfare state. This leads to a number of clear conclusions.

First, there is a clear need for increased funding. The main political parties’ proposals all take the UK either closer to or above historical levels of NHS expenditure growth. Whether this is enough to improve services adequately remains an open question.
Second, it is clear that given the expenditure cuts witnessed by other parts of the public sector, including to local authority budgets, government expenditure cannot be reallocated from other sectors into the NHS. To maintain NHS expenditure growth at historical levels, revenue will have to come from either raised taxes, increased borrowing or both.

There will also have to be a clear fix to supporting social care services. All political parties need to be honest with the public that this is what necessary to secure the long-term future of the NHS.
Further reading


Dayan, M, D Ward et al (2018) ‘How Good is the NHS?’, The Health Foundation, the Institute for Fiscal Studies, the King’s Fund and the Nuffield Trust (https://www.health.org.uk/publications/nhs-at-70-how-good-is-the-nhs?gclid=EALaIQobChMIhJiY3pKF5gIViTCh2qXARzEAAAYASAAEgJ2bPD_BwE).


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Policing and Crime

Tom Kirchmaier

#GE2019Economists
Policing and Crime

CEP ELECTION ANALYSIS

Tom Kirchmaier

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- Policing and crime have quickly moved up the list of electoral concerns, with crime being ranked the third most important issue behind Brexit and the NHS in a recent public survey.

- All three main parties have pledged to invest in policing, promising to hire around 20,000 additional police officers. This will be difficult to achieve and is likely to put considerable strain on police forces to deliver on that target.

- If this recruitment occurs, it will end a long period of austerity including budget cuts in policing that has considerably reduced the size of UK forces, hitting forces outside London particularly hard.

- As austerity bit and budget cuts were implemented, violent crime rose in England and Wales after decades of falls. Rising knife crime is particularly prominent.

- If deployed efficiently, there is scope for the additional officers to reduce crime. The effect may vary across places, as larger cities are more difficult to police.

- Consideration needs to be given to the overall operations of the criminal justice system, in particular if and how it would be able to deal with the extra workload generated by additional police officers.
Introduction

A long period of austerity and budget cuts in policing that started when Theresa May became Home Secretary may be coming to an end. As austerity bit and budget cuts were implemented, this considerably reduced the size of UK forces and their ability to fight crime.

But as violent crime has started to go back up over the past few years, so have voter concerns. According to a YouGov poll on 7 November 2019, crime is now ranked third in the list of issues facing the country, behind Brexit and the NHS. All three main parties have announced plans for investment in new police officers.

The legacy of austerity for policing

As Figure 1 shows, police officer and police staff numbers have fallen quite dramatically since 2010. Cuts were particularly heavy for forces outside London. From a peak of 146,000 police officers and 81,000 police staff in 2010, numbers reduced to 126,000 and 66,000 respectively. This is a loss of about 20,000 officers and 15,000 police staff. Over the same period, between 400 and 600 police stations closed (estimates by the House of Commons library), as did numerous youth centres and other services.

Figure 1: Police officer and staff numbers in England and Wales

Note: All dates are as of 31 March 2019.
Source: Data from Home Office.

Clearly, it is a positive signal that all parties have pledged to bring officer numbers back up to 2010 levels, with the Conservatives promising to hire 20,000 additional officers, Labour 22,000 and the Liberal Democrats 20,000 (with an associated 2% pay increase).
Efficient modern policing, however, requires much more than the ‘bobby on the street’. It needs modern equipment, sophisticated technical capabilities and front-line police officers effectively directed by back office staff. The public also expects efficient communication by the police service with the people it serves. A simple focus on officers might not be enough to address the additional resources needed by the entire policing ‘ecosystem’.

Moreover, another challenge is that a wave of retirements will shortly ‘hit’ the police service: 23,000 officers are expected to retire or leave the service over the next three years. Given that all parties have pledged around 20,000 new officers, this implies that the service would have to recruit and train up around 43,000 new officers in a very short time period, a truly herculean task.

It is unclear if the services will have the capabilities to do that, especially considering that there has been a hiring freeze in place for almost a decade, resulting in considerable reductions in the capacity to recruit and train new officers.

**The return of violent crime**

Figure 2 shows changes in violent crime in England and Wales since 1990. It was falling for a long period, but more recently as austerity bit and budget cuts occurred, violent crime has risen.

![Figure 2: Crime in England and Wales](image)

Source: Data from ONS.

Figure 2 shows the recent increase in the murder rate, now at its highest for ten years. Rising knife crime is particularly prominent. Knives, and other sharp instruments, are used in about 40% of all murders. Most of these are male-on-male incidents. London is the area with the highest rate of knife crime, as Figure 3 shows.

The second most common cause of murders is associated with domestic abuse cases. In the UK, more than two women a week are killed in a domestic abuse case.
Figure 3: Number of murders per year and gender in England and Wales

Source: Data from ONS.

Figure 4: Knife crime rates by area
April 2018 to March 2019

Source: Data from ONS.

Figure 4 shows knife crime rates by area of the country; Figures 5 and 6 show the monthly data for knife crimes in London. The first depicts all cases where a knife was involved or found, with the second showing only the cases in which someone was injured. Figure 5 shows that there was a turning point around 2015 when levels of knife crime started to rise, that the overall level of knife crimes has recently flattened out, with Figure 6 showing that the number of knife crimes involving injury has fallen (Kirchmaier et al 2019a).
Increasing police numbers

A body of academic research shows that if deployed well, more police can reduce crime (Bindler et al, 2018; Di Tella and Schargrodsky, 2004; Draca et al, 2011; Levitt, 1997). This is in line with the intuition of the general public that police presence matters in deterring crime and keeping people safe. It seems reasonable that if deployed efficiently and if the police are able to recruit the stated numbers, then levels of crime could be brought down. Unfortunately, both are significant ‘ifs’.

The debate on police officers overlooks the fact that the entire criminal justice system needs additional resources. More officers will create more work for the Crown Prosecution Service (CPS), and it is unclear that the CPS will be able to deal with the additional workload. The same argument then applies to the courts and prisons in turn.

The perception of safety is important in generating economic activity, and hence generating the taxes that keep society going. It is a fact of life that cities are more productive, and London particularly so. But it is also true that larger cities have more crime, and more serious crime. To take just one example, Figure 7 illustrates the relationship between homicides and population in England and Wales by police force area (Kirchmaier et al 2019b).
Evidence-based policing

In recent years, the large urban police forces have made substantial progress in setting up ‘evidence-based policing’ (EBP) groups, and working much more closely with university researchers. This allows forces to gain important insight into operational (in)efficiencies, to analyse crime patterns and to base their decisions on more scientific methods.

The issue is that many smaller forces do not seem to have sufficient resources or technical capabilities to engage in EBP. Relatively cheap investment in back office systems could help forces to reap the benefits from ‘big data’ and improved analysis.

Final words

Voter preferences on policing and crime have changed, and so have the pledges of the political parties about staffing, which have all promised about 20,000 new police officers over the next three years. The underlying driver is steep rises in violent crimes after decades of falling crime numbers.

While additional resources for policing are undoubtedly positive news, and they would help to reduce crime levels if deployed efficiently, questions remain about whether forces will be able to recruit and train considerable number of new officers, in particular as a retirement wave will hit the forces at the same time. Some of these resources might in fact be better used in improving back office functionality and modernising the force and updating the skills of its staff.
We also need to consider that policing is just one part of the criminal justice system, which will need strengthening across the entire system should the new officers be expected to make a difference.

Further reading


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