

REPORT

OUT OF SHAPE

TAKING THE PULSE OF THE UK ECONOMY



Michael Jacobs,
Alfie Stirling
and Catherine Colebrook

November 2016
© IPPR 2016

ABOUT IPPR

IPPR, the Institute for Public Policy Research, is the UK's leading progressive thinktank. We are an independent charitable organisation with more than 40 staff members, paid interns and visiting fellows. Our main office is in London, with IPPR North, IPPR's dedicated thinktank for the North of England, operating out of offices in Manchester and Newcastle, and IPPR Scotland, our dedicated thinktank for Scotland, based in Edinburgh.

Our purpose is to conduct and promote research into, and the education of the public in, the economic, social and political sciences, science and technology, the voluntary sector and social enterprise, public services, and industry and commerce.

IPPR

4th Floor

14 Buckingham Street

London WC2N 6DF

T: +44 (0)20 7470 6100

E: info@ippr.org

www.ippr.org

Registered charity no: 800065 (England and Wales), SC046557 (Scotland).

This paper was first published in November 2016. © 2016
The contents and opinions in this paper are the authors' only.

IDEAS to
CHANGE BRITAIN

CONTENTS

- Overview..... 5
- Symptom 1: The investment problem 9
- Symptom 2: The trade problem..... 15
- Symptom 3: The fiscal problem 21
- Symptom 4: The income problem 29
- Symptom 5: The regional problem 35
- Symptom 6: The carbon problem..... 41
- The IPPR Commission on Economic Justice..... 47
- References 49
- Annex: Members of the IPPR Commission on Economic Justice 53

ABOUT THE AUTHORS

Michael Jacobs is director of the IPPR Commission on Economic Justice.

Alfie Stirling is senior economic analyst at IPPR.

Catherine Colebrook is chief economist and associate director for economy and housing at IPPR.

ACKNOWLEDGMENTS

The authors would like to thank all our IPPR colleagues whose comments and suggestions improved this report at various stages. In particular, we would like to thank Tom Kibasi, Izzy Hatfield and Helen Ho for their contributions.

PHOTOGRAPHY

Photographer: Jess Hurd, jesshurd.com

All photographs featured in this report © Jess Hurd/IPPR.

Download

This document is available to download as a free PDF and in other formats at:
<http://www.ippr.org/publications/out-of-shape>

Citation

If you are using this document in your own writing, our preferred citation is:

Jacobs M, Stirling A and Colebrook C (2016) *Out of shape: Taking the pulse of the UK economy*, IPPR. <http://www.ippr.org/publications/out-of-shape>

Permission to share

This document is published under a creative commons licence:
Attribution-NonCommercial-NoDerivs 2.0 UK
<http://creativecommons.org/licenses/by-nc-nd/2.0/uk/>
For commercial use, please contact info@ippr.org





OUT OF SHAPE

TAKING THE PULSE OF THE UK ECONOMY



Demolition and
redevelopment
of Birmingham
Central Library

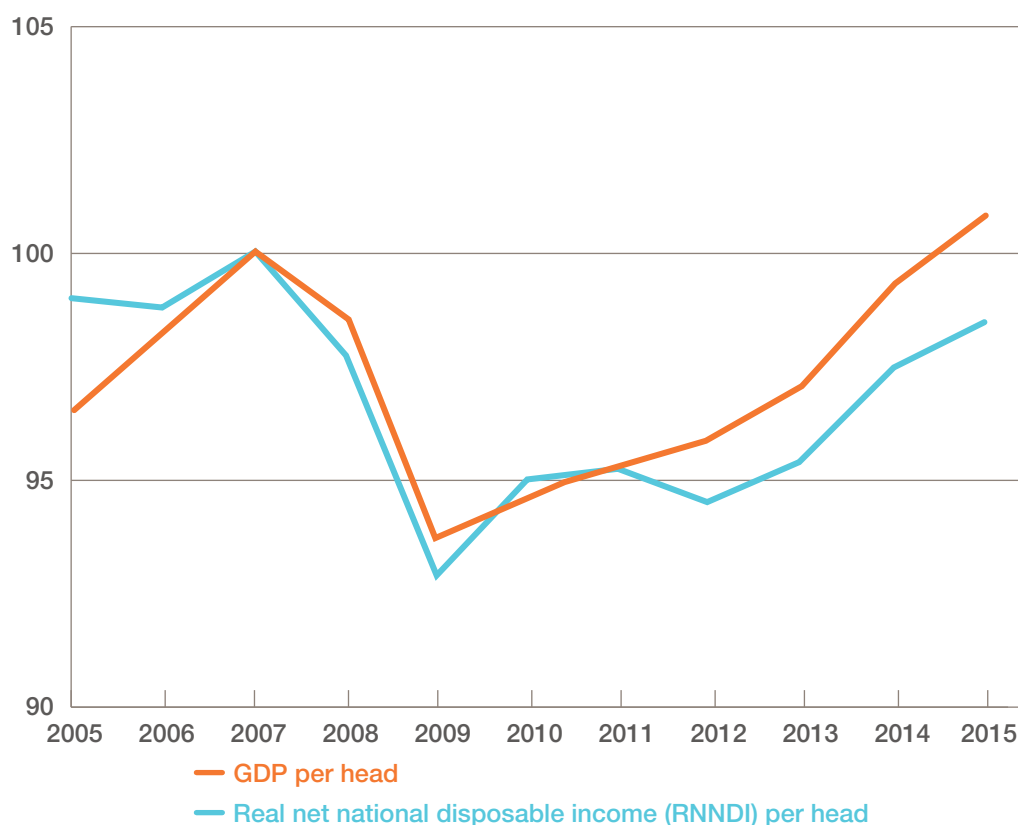
OVERVIEW

Britain is a successful country. We have the sixth-largest economy in the world. We have world-leading companies and an educated, creative and entrepreneurial population. We are a global cultural power. Over the last three years, since the UK economy regained the level of national income it had before the financial crash, the economy has been steadily growing at more than 2 per cent a year. National income is now around 7 per cent higher than it was in 2008 (ONS 2016a).

Yet this picture of top-line success is just that: one of an economy that is succeeding at the top, but facing deep troubles below the surface. Since the EU referendum, successive chancellors of the Exchequer have asserted that Britain is ‘the strongest major advanced economy in the world’ (HM Treasury 2016), and that we enter the Brexit negotiations from a position of ‘fundamental economic strength’ (Hammond 2016). However, the evidence presented in this report shows the opposite: the UK economy has fundamental problems that can no longer be left unaddressed.

FIGURE A.1

Disposable national income per head is still below 2008 levels
UK GDP and disposable income per head, 2005–2015 (2007 = 100)



Source: adapted from Haldane 2016: chart 3

The headline figures mask an economy that is not working for the majority of the population. As the chief economist of the Bank of England, Andrew Haldane, has pointed out, GDP may be 7 per cent higher now than in 2008, but when adjusted for the UK's growing population and income flowing overseas, national income per head has barely grown at all (Haldane 2016) (see figure A.1). Moreover, the proceeds of growth have not been fairly shared. Median household disposable income has been flat since around 2005, meaning that half of all UK households have seen no meaningful improvement in their incomes for more than a decade (ibid).

We are also a country deeply divided by geography. The recovery has occurred entirely within London and the South East: in no other region of the country has GDP per head recovered to its pre-crisis peak. When a majority of voters rejected warnings, during the EU referendum campaign, not to put the 'economic recovery' at risk, they did so precisely because most parts of the country had not experienced any such recovery.

Moreover, the UK economy is vulnerable. It is receiving too little investment, both public and private. Productivity is stubbornly low, and has stalled since the financial crisis. Our balance of trade deficit is large and widening, financed only (as Bank of England governor Mark Carney has put it) by the 'kindness of strangers' willing to continue to buy UK assets. We face unknown risks from capital markets that have not been fully re-regulated. Growth is sustained only through the life-support provided by record-low interest rates and continued use of quantitative easing. Rising house prices sustaining more household borrowing for consumption is not a reliable basis for long-term growth.

In this report we identify six symptoms of the deeper problems in the British economy, and in the six chapters that follow we examine each of them in depth.

- **Symptom 1: The investment problem**
We invest substantially less than our peers in other developed countries, and investment as a proportion of GDP has been declining.
- **Symptom 2: The trade problem**
We import far more by value than we export, and this problem, too, has been worsening over time.
- **Symptom 3: The fiscal problem**
The government's revenue-raising capacity is lower than its spending obligations, and is set to deteriorate further as the population ages.
- **Symptom 4: The income problem**
Most of the gains from economic growth flow to a small minority of the very richest in society, while those on lower incomes have seen their incomes stagnate.
- **Symptom 5: The regional problem**
London and the South East perform significantly better than the rest of the UK in terms of income and productivity, leading to widening regional inequality.
- **Symptom 6: The carbon problem**
We are falling short of the emissions reductions required to achieve our statutory carbon targets, and thereby to meet our global commitments on tackling climate change.

What is striking about these problems is that none of them is a recent phenomenon: each has been steadily growing for at least a quarter of a century. Moreover, as we demonstrate in this report, they are interconnected, with each arising from deeper structural causes.

Taken together, these symptoms suggest that there is something fundamentally wrong with the way our economy works. Its inability to generate a sustainable pattern of economic growth, and to distribute its rewards in ways that benefit the majority of the population, raises a deeper question. That question is not simply one of how to address temporary weaknesses in an otherwise sound model: it is whether the very character and structure of the economy need to be rethought. Addressing these problems will require more profound policy change than has previously been acknowledged.

Brexit forces us to face up to the diagnosis. We have an economy that is not delivering what it should for the British people. The paradox of the Brexit vote – a mandate for change that may make change harder to achieve – requires a far-reaching response.

It is for this reason that IPPR is launching a major new programme: the IPPR Commission on Economic Justice. Over the next two years, the Commission will conduct a comprehensive examination of the British economy. It will look both at its ability to generate wealth, and the fairness with which it works – and how these are related to one another. The Commission's members have been drawn from across our economy and society. Its research programme will seek to understand the economy as it is experienced by the people who work in it, all over the country – an ambition reflected in the photographs with which this report is illustrated.

The Commission has a high ambition: to rewrite the rules for the post-Brexit economy. It will craft a new vision for the UK economy in 2030, affirm a stronger sense of shared national purpose, and generate long-term policy solutions to Britain's longstanding economic failings. Its goal is to build sustainable prosperity for all households, sectors, regions and nations of the country – in an economy that properly belongs to us all.

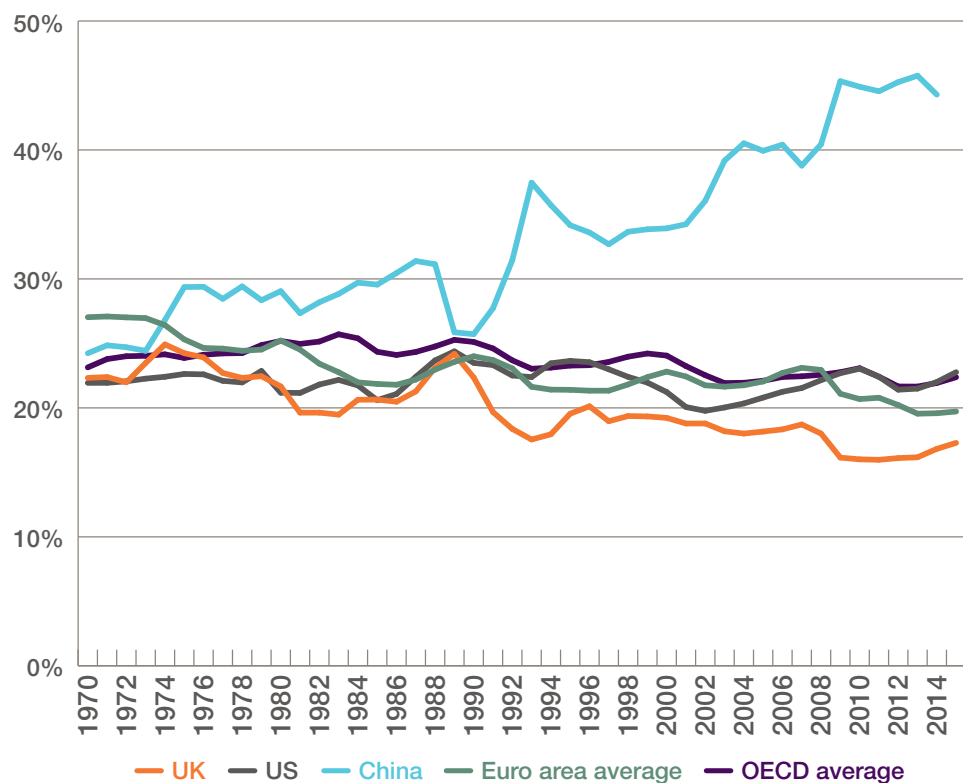


Tata Steel, Port
Talbot, South Wales

SYMPTOM 1: THE INVESTMENT PROBLEM

FIGURE 1.1

Investment is lower in the UK than in most other comparable economies, and has been declining for the last 25 years
Gross fixed capital formation as a percentage of GDP, UK, China, US, and euro area and OECD averages, 1970–2014



Source: World Bank 2016a

Investment is the engine of any economy: it drives both productivity and income growth. However, investment in the UK economy, as a proportion of GDP, has been consistently lower than in most other developed countries for a quarter of a century. At around 17 per cent of GDP, the rate of investment in the British economy (including both the private and public sectors) in 2014 was around 5 percentage points below the average of OECD economies. This gap has widened over time: in 1970 it was less than 1 percentage point. The gap between the UK and other leading economies is even wider: the US investment rate, for instance, was 22 per cent in 2014 (World Bank 2016a).

There is a similar gap between the UK and its major competitors in terms of private sector investment: corporate investment in fixed assets (not including construction) fell from 11 per cent of GDP in 1997 to 8 per cent in

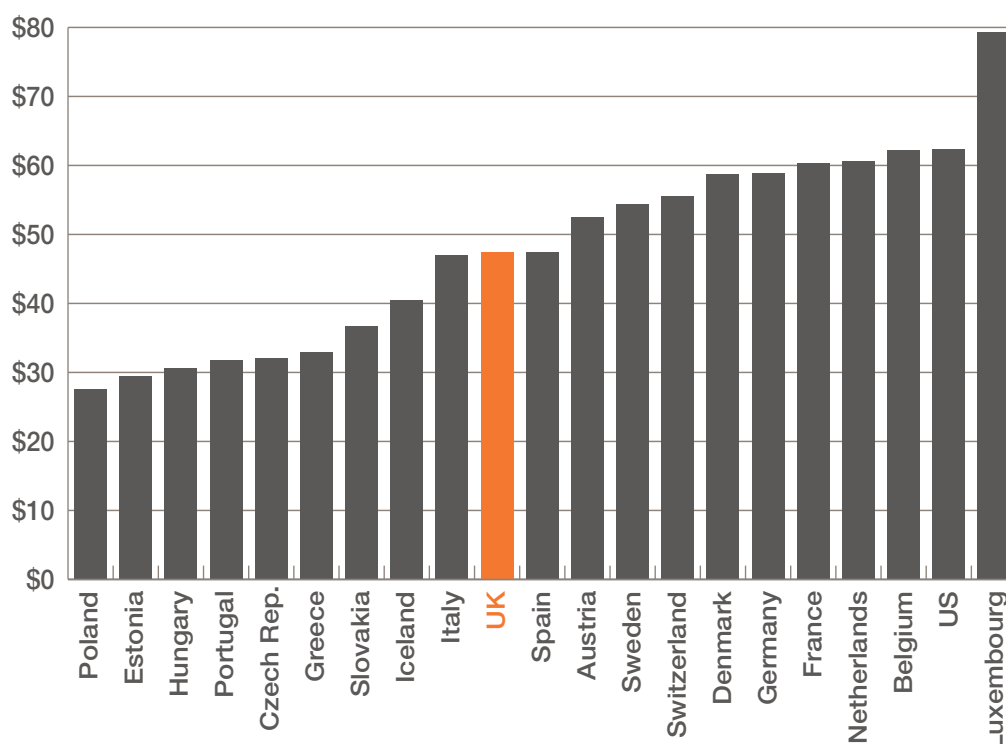
2014 – well below the rate of capital depreciation. The comparable level of corporate investment in the US in 2014 was 12 per cent (OECD 2016a).

One of the reasons why the UK has a relatively low, and declining, rate of investment is the shift in the structure of the UK economy that has occurred since the 1970s. Britain has moved significantly away from more capital-intensive manufacturing towards more labour-intensive services. While some movement of this kind has occurred in all advanced economies, the shift has been much more stark and dramatic in the UK than in many other countries. Manufacturing in the UK now makes up just 10 per cent of the economy’s total gross value added (GVA), compared with 23 per cent in Germany and 12 per cent in the US (OECD 2016b).

FIGURE 1.2

UK productivity is low compared with most comparable advanced economies

Productivity levels (GDP per hour worked, US\$, 2010 prices, purchasing power parity) for Europe-24 nations and the US, 2014*



Source: OECD 2016c

*Note: ‘Europe-24’ nations are European nations that are also members of the OECD.

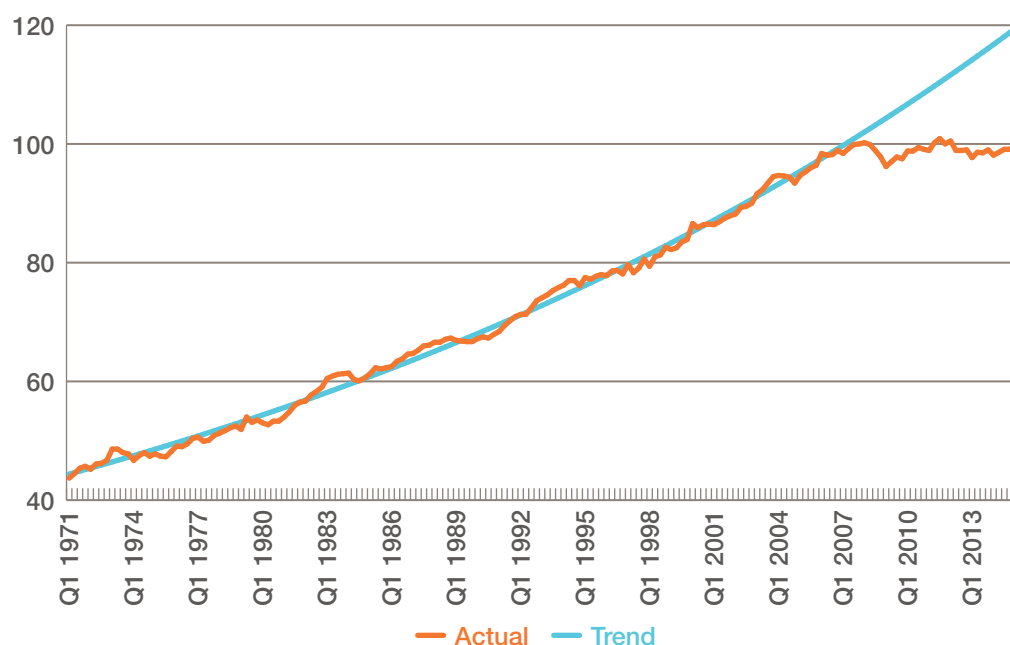
One of the consequences of this is that the UK’s productivity (output per hour) has consistently lagged behind those of our major competitors (see figure 1.2). Low productivity slows the rate of sustainable growth, and itself then contributes to weak investment.

Since the 2007–2008 financial crisis, a further problem with the UK’s productivity performance has emerged: productivity growth has more or less stalled altogether (see figure 1.3). Two different factors appear to explain this (Dolphin and Hatfield 2015). During the recession that

immediately followed the crash, low productivity growth was driven by a decline in labour costs relative to capital, with the result that firms retained labour and did not invest in capital equipment. Since 2012 this has been compounded by a shift in the composition of the UK economy, with employment growing faster in the labour-intensive sectors than in finance and manufacturing. A severe trade-off has effectively been made in Britain: employment has been sustained at a higher level than in many other countries, but at a significant cost to the economy's overall productivity. As labour markets have become more and more 'flexible', it has become cheaper for firms to buy labour than to invest in new plant and machinery.

FIGURE 1.3

UK productivity growth has stalled since the 2007–2008 financial crisis
UK output per hour (actual versus long-term trend), Q1 1971–Q1 2015 (2011 = 100)



Source: IPPR calculations using ONS 2016b

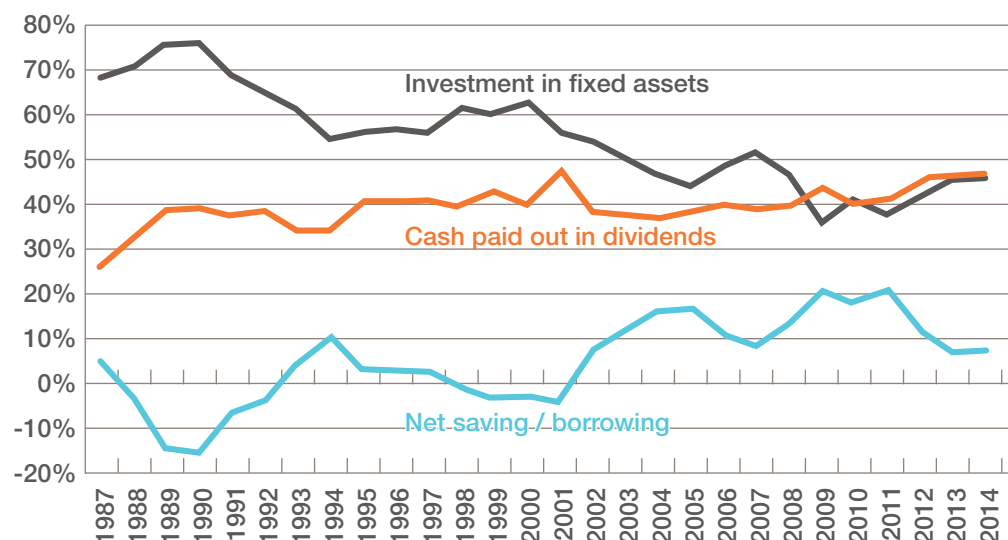
The UK's comparatively low and declining rate of investment appears, therefore, to be a consequence partly of the sectoral composition of the economy, and partly of the relative ease of hiring or contracting labour. However, the evidence increasingly suggests that this low investment is also related to the nature of the UK's financial markets and corporate behaviour. Research by the Bank of England has shown that the UK's capital markets are more 'short-termist' than they used to be, and are more so than those of other countries (Davies et al 2013, Hughes 2013, Haldane 2016). That is, there has been an observable increase in the priority that investors give to short-term returns over long-term returns. The result is that, over the last quarter of a century, the proportion of profit that UK companies have been distributing to shareholders, rather than reinvesting into their businesses, has been increasing. For UK non-financial corporations, the proportion of discretionary cash flow returned to shareholders increased from 39 per cent in 1990 to

46 per cent in 2014 (Tomorrow's Company 2016). This has inevitably reduced the funds available for investment.

FIGURE 1.4

The UK corporate sector is now a net saver, not a borrower, and investment is declining

Proportion (%) of UK non-financial corporation cash flow allocated to investment, dividends and saving, 1987–2014



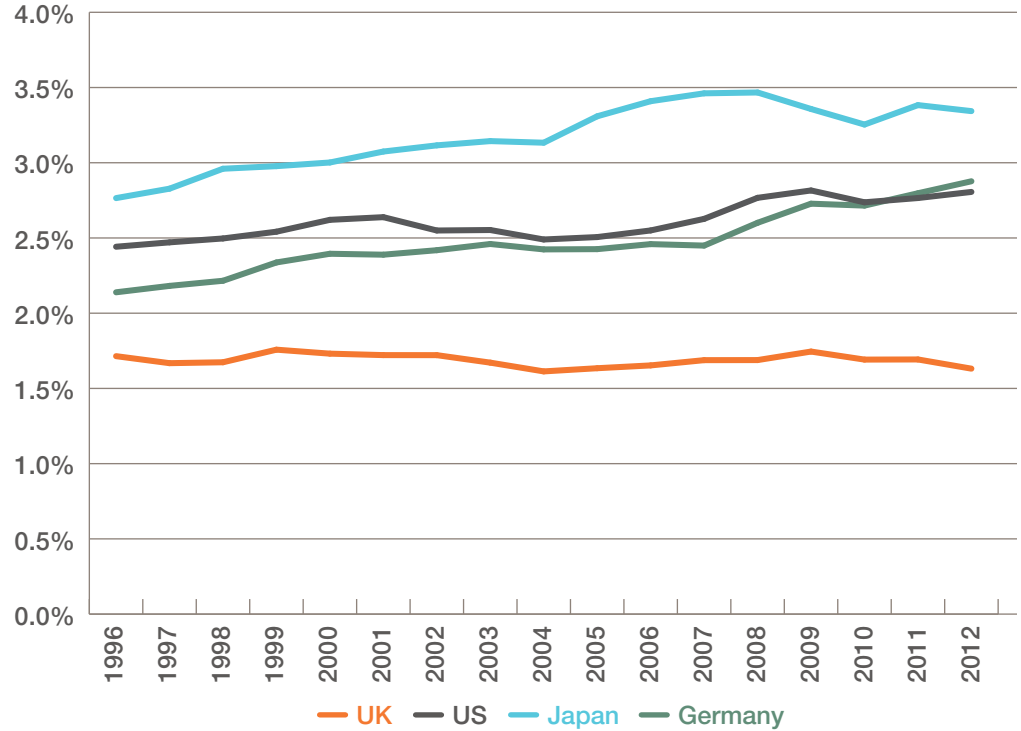
Source: adapted from Tomorrow's Company 2016: 11

One of the most remarkable results of this trend is that UK companies are now net savers in the economy (see figure 1.4). In the past, the UK corporate sector was a net borrower, reflecting the traditional role of companies as channels for investment – taking savings from others and investing them in productive, growth-generating activity. However, over the last 15 years the UK corporate sector has become a growing net saver – effectively a lender of money to governments and households. In 2014, non-financial corporations ran a net surplus of £107 billion, or 7 per cent of GDP (Tomorrow's Company 2016). As figure 1.4 illustrates, a rising proportion of these surpluses have gone into shareholder dividends and share buybacks: the distributed income of UK non-financial corporations rose from 14 per cent of GVA in 1990 to 18 per cent in 2014 (Tomorrow's Company 2016). This has increased share prices but left investment in decline.

A particularly notable trend in the UK's investment picture is the stalling of public and private spending on research and development (R&D). The motor of innovation, R&D spending in our major competitor countries has risen over the last three decades, while in the UK it has remained flat (see figure 1.5). The UK invested 1.6 per cent of GDP in R&D in 2012, while the Euro area invested 2.1 per cent, and the US 2.8 per cent (Tomorrow's Company 2016). While the decline in overall investment can be partly explained by the sectoral composition of the UK economy, the UK's spending on research and development remains lower than our major competitors' even after correcting for our disproportionately large service sector (Hughes 2013).

FIGURE 1.5

The gap between the UK's spending on research and development (R&D) and those of our competitors has widened
R&D as a percentage of GDP in the US, Japan, Germany and the UK, 1996–2012



Source: World Bank 2016b

The UK's investment gap threatens its prospects for economic growth in the post-Brexit era. Over the last few years, the combination of net saving in both the corporate and public sectors has made it difficult for the economy to grow. Very low interest rates and quantitative easing have been required to maintain demand, but at a cost to long-term saving, particularly pensions, and with the result of rising wealth inequality. Over the medium and long terms, sustainable growth requires higher levels of investment. There is now increasing recognition of the fact that public investment – notably, but not only, in infrastructure – can not only stimulate demand itself but 'crowd in' private investment (Griffith-Jones and Cozzi 2016). At the same time, the government has signalled its increasing interest in the potential for a more active industrial strategy to strengthen British firms and industrial sectors (Hoc-BISC 2016). The evidence on short-termism increasingly suggests that reform to capital markets and corporate governance must also be on the agenda.

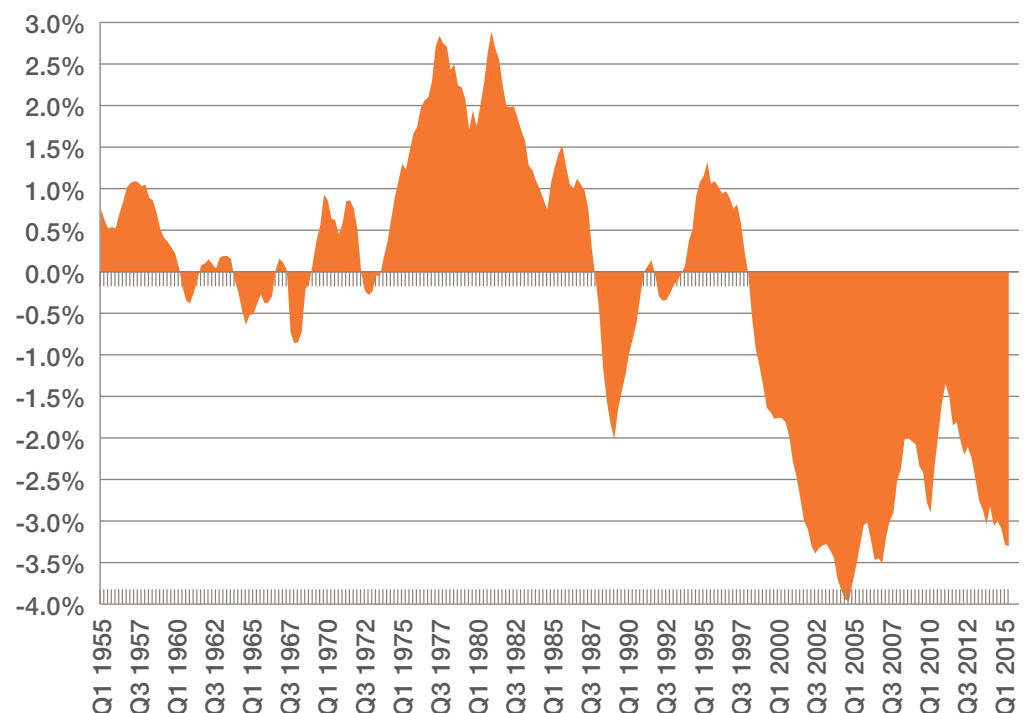


Liverpool Peel Ports

SYMPTOM 2: THE TRADE PROBLEM

FIGURE 2.1

The UK trade deficit has grown significantly since the late 1990s
Balance of trade, percentage of UK GDP (%), Q1 1955–Q1 2016



Source: IPPR calculations using ONS 2016c

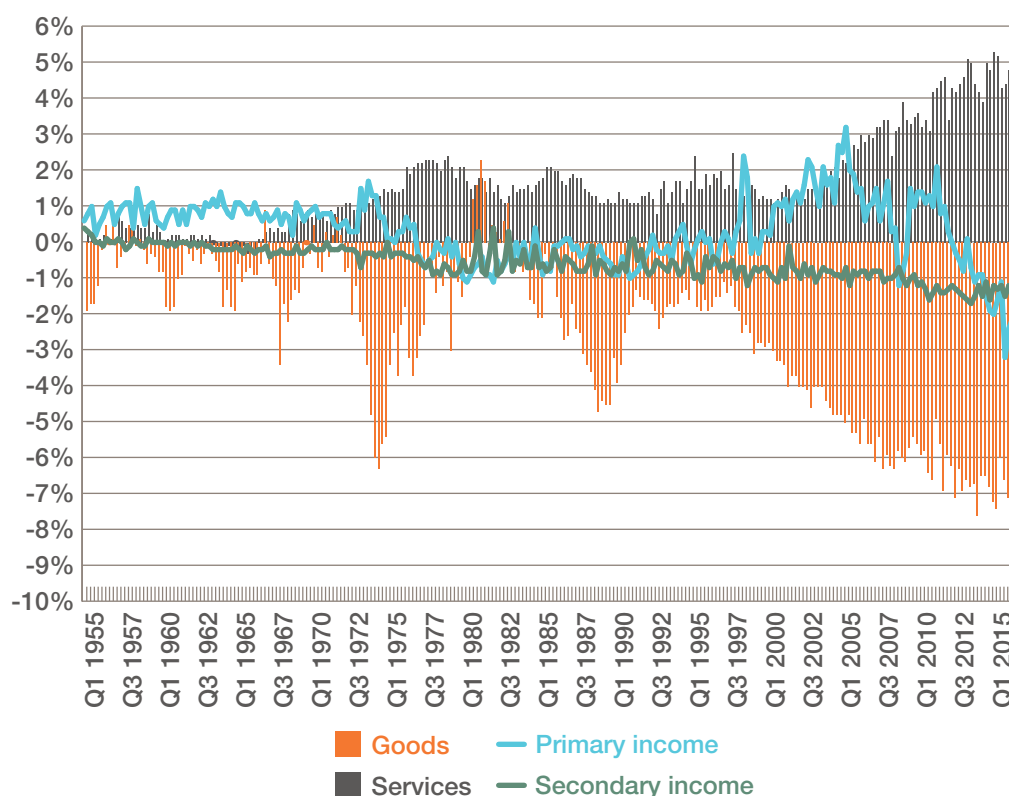
The UK buys far more from the rest of the world than it sells to it. The UK's trade deficit has exceeded 2 per cent of GDP for 14 of the past 15 years, and in many of those years it has been more than 3 per cent (ONS 2016c). This persistent imbalance indicates that the UK economy lacks competitiveness relative to those of other countries.

The overall deficit in trade is driven by a deficit in goods, which is only partially offset by a surplus in services. The UK's overall current account balance with the rest of the world is made up of the trade in goods and services together with two other forms of income: primary income (the difference between wages and profits paid abroad and international profits accrued by UK firms) and secondary income (payments such as international aid that do not accrue a direct economic asset in return). Over the last 10 years, income from the UK's investments overseas has fallen dramatically (see figure 2.2), largely because many of these investments are in the rest of the EU, where growth has been very weak. More recently the fall in the price of oil has also reduced overseas

investment income (although some of these effects have gone into reverse, given the recent fall in sterling). The result is that the overall current account is also very much in deficit: the four-quarter trailing average grew to 5.8 per cent of GDP in the second quarter of 2016 – the highest on record.

FIGURE 2.2

Three out of four components of the current account are in deficit
The components of the current account as a percentage of GDP, Q1 1955–Q2 2016



Source: IPPR calculations using ONS 2016c

The UK finances its current account deficit with a surplus on its capital account, made up of the flows of assets (including both long-term foreign direct investment and short-term purchases of shares and bonds) to and from the UK. So long as there is demand for UK assets, the current account can continue to be financed in this way. However, if the value of UK businesses and their perceived future growth prospects were to decline – with foreign lenders demanding higher returns to hold UK assets – the value of sterling would fall and the current account would have to adjust, at least in the short term, with a reduction in imports and a decline in consumption and living standards. This would pose real recessionary risks. The large current account deficit therefore makes the UK particularly vulnerable to a weakening in domestic economic conditions, a fact that is especially concerning in the light of the uncertainties caused by the result of the EU referendum.

The recent depreciation of the pound is a reflection of such concerns. In the first four months after the referendum, the value of the pound fell by 18 per cent against the US dollar, reaching levels not seen since the mid-1980s. Although this will raise import prices and therefore create inflationary pressures, it can in many ways be seen as a welcome correction of a currency that had become over-priced. Throughout the last three decades, the relatively high value of the pound made British exports expensive compared to those of our competitors: this both caused and exacerbated the decline of the UK manufacturing sector; in turn, this contributed to the UK's lower level of investment and productivity. Unfortunately, however, that does not mean that a weakened pound – even if it is sustained – will automatically result in significant improvements to the trade deficit.

This is for three reasons. First, exports need markets, and demand for UK goods and services in our largest trading partner, the EU, may not be sustained at the same level following Brexit. It is notable that the last time the value of sterling fell significantly, during the 2007–2008 financial crisis, this did not lead to an increase in exports and a fall in the current account deficit. Indeed, the trade balance deteriorated further, because demand for UK exports from the eurozone collapsed at the same time (Hardie et al 2013).

Second, and more significantly, many of the UK's manufactured exports are highly import-intensive (BIS 2012). That is, the UK tends to export goods with a high proportion of imported components. This reflects the fact that the UK has a relatively weak manufacturing sector, with concentration in relatively narrow fields, and major import dependence in its industrial supply chains. This contrasts with, for example, Germany, where manufacturing supply chains are maintained domestically in 'industrial clusters'. This not only creates mutually beneficial spillover effects in innovation, adaptability and competitiveness, but maximises the benefits of a competitive currency (Lawrence and Stirling 2016). In the UK, by contrast, a lower pound may reduce the relative price of exported goods, but part of any resultant gains will be eaten away by an increase in the costs of their production because of this reliance on imported components.

Third, and related to this, the UK is disproportionately dependent on a small number of industries to drive its exports, compared with most other advanced economies (Dolphin 2014). Figure 2.3 shows the spread of 'revealed comparative advantage' in the UK economy compared to those of Germany and Japan – two advanced economies with significant trade surpluses. 'Revealed comparative advantage' is the ratio between a given industry's share of UK exports and the proportion of total global exports in that sector that those exports make up.

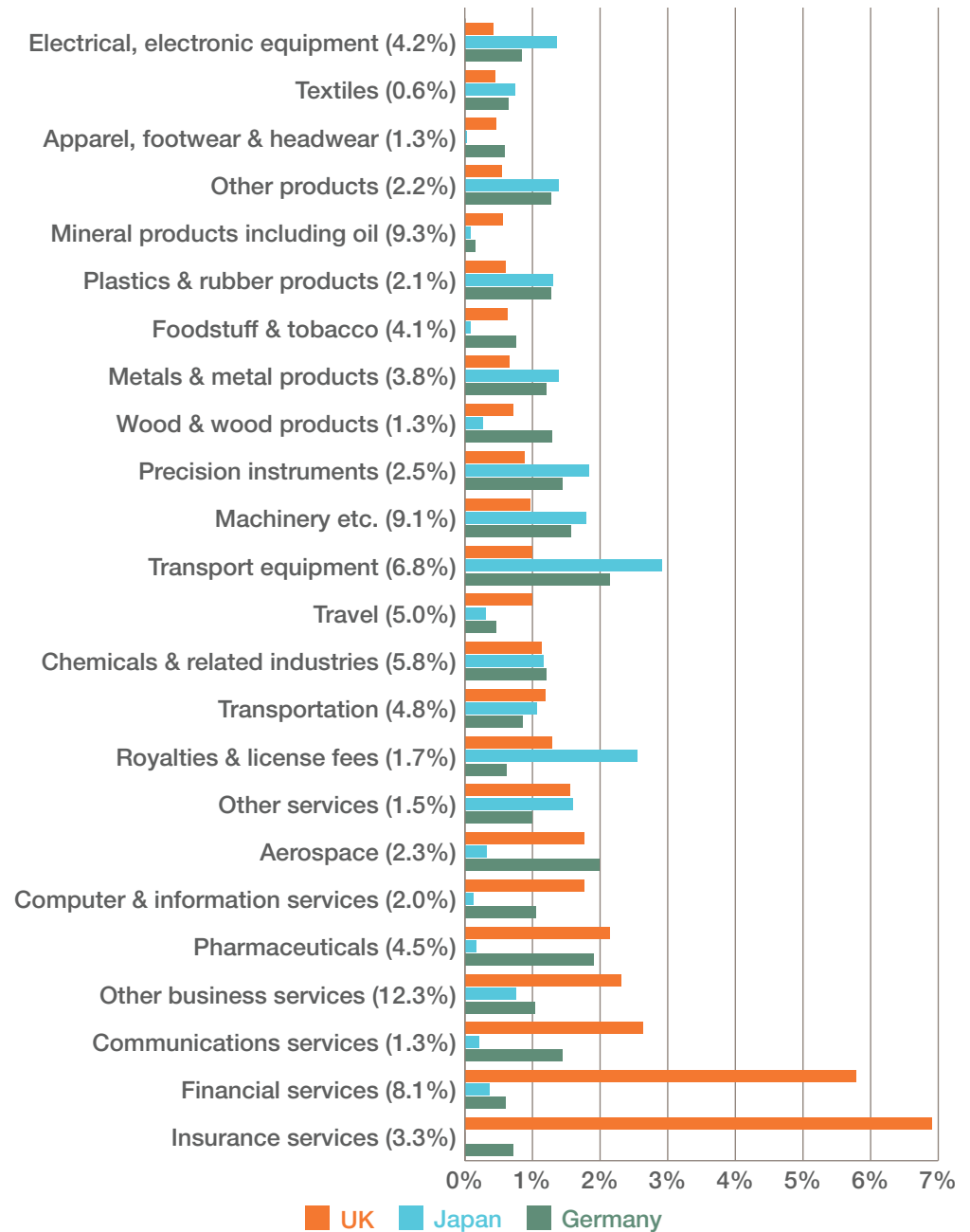
The UK's revealed advantage is hugely dependent on just two industries, both of them in the financial sector, while Germany and Japan display a much more balanced and diverse spread. This reflects the UK's overall trade weakness, particularly in manufacturing. It also reveals the significant economic risk posed

by the possibility that the UK's financial services sectors may lose their passporting rights in the coming negotiations with the EU over the terms of Brexit.

FIGURE 2.3

The UK is disproportionately reliant on a small number of exporting industries

Revealed comparative advantage by industry (%) for the UK, German and Japanese economies (with UK sector share of total UK exports in brackets), 2012



Source: IPPR calculations using ITC 2014

Note: erratic items – pearls, precious stones, metals, coins and works of art, collectors' pieces and antiques – were excluded from the calculations shown.

The UK's trade gap is, therefore, of particular concern in light of the EU referendum result. However, equally, that result may provide the additional motivation required to find the means of closing it. Increasing the UK's exports, particularly in manufacturing, and reducing its import dependence in key industrial supply chains, will almost certainly require a more active approach to industrial policy than has hitherto been attempted.



0151 70

Central Liverpool Credit Union

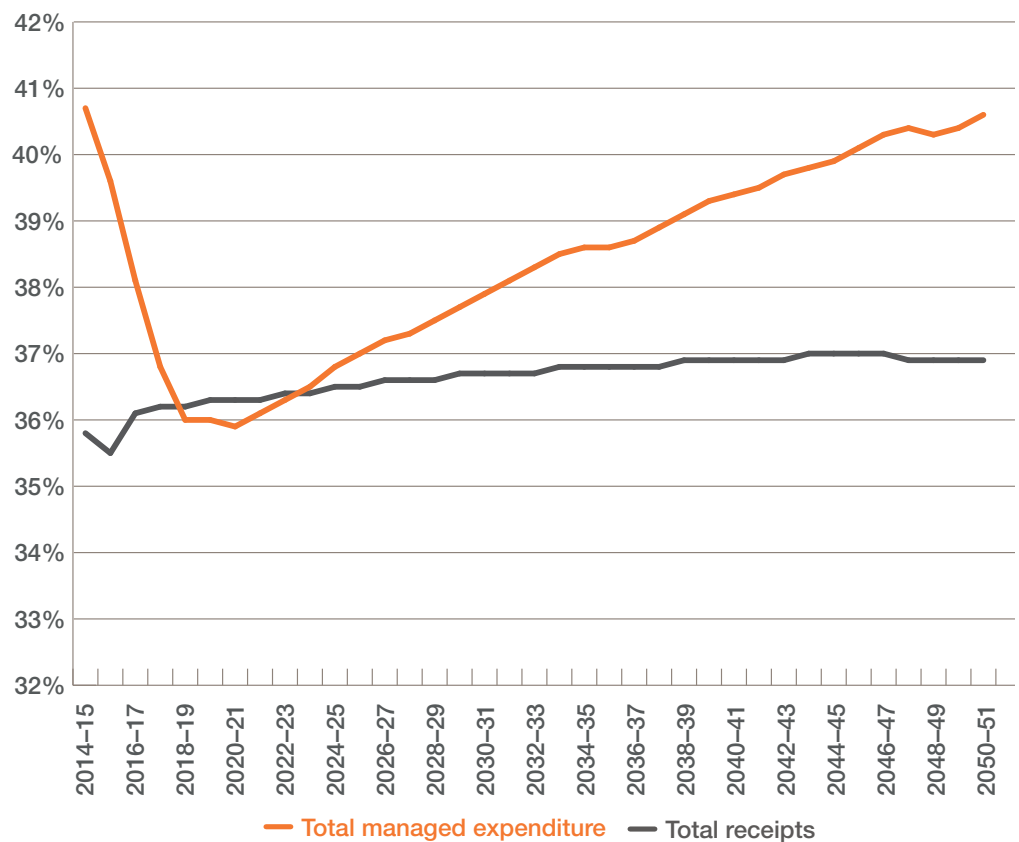
Central Liverpool
Credit Union

SYMPTOM 3: THE FISCAL PROBLEM

FIGURE 3.1

UK spending liabilities are projected to exceed tax revenues by an increasing margin

Projected total government managed expenditure and total government receipts (% of GDP), 2014/15–2050/51



Source: OBR 2015

Without a significant change in fiscal policy, the UK's public finances are unsustainable over the long term. Figures published by the Office for Budget Responsibility (OBR) in 2015 showed that, even if a surplus were achieved in 2019/20 (as was then the government's target), the UK would still return to deficit within four years even without any new government spending commitments (OBR 2015). Within 30 years, the gap between expected public spending and forecast tax receipts was projected to rise to £341 billion – almost double the expected 2016/17 deficit as a percentage of GDP (ibid).

The new chancellor, Phillip Hammond, has signalled that a budget surplus is no longer the government’s aim. Most economists would argue that a fiscal deficit is not of itself a problem, particularly if it is financing investment that contributes to long-term growth. However, a rising fiscal gap between expenditure and tax receipts of the kind currently projected is not sustainable in the medium-to-long-term.

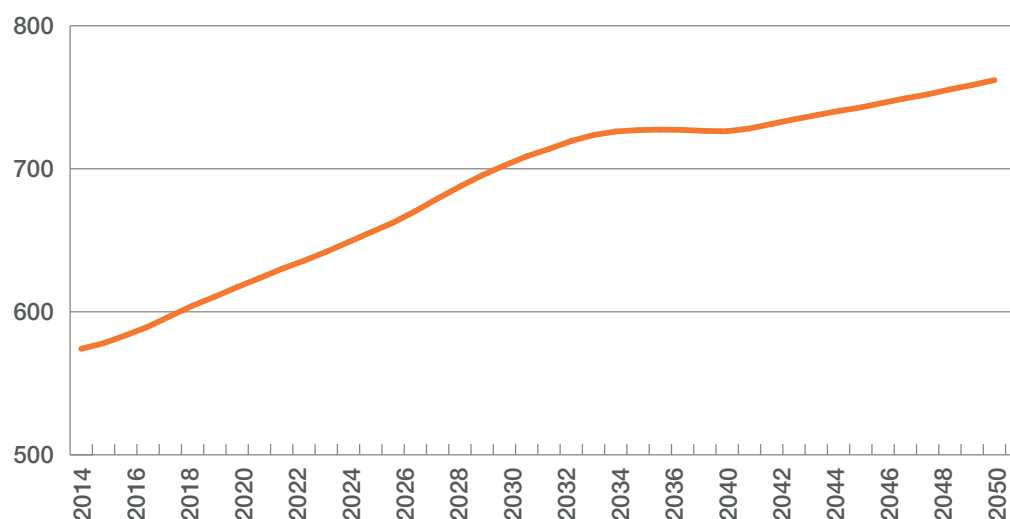
This widening deficit is driven by social liabilities growing faster than tax receipts. The single most important factor is the UK’s aging population, which will increase demand both for pensions and – combined with ever-advancing treatment methods for diseases of old age – for cost-intensive health and social care. Between 2015 and 2050, the proportion of the UK population aged over 65 is expected to rise from around one-in-six to one-in-four (authors’ calculations using ONS 2014). This is expected to contribute to an increase in public expenditure of as much as 2.5 percentage points of GDP between 2019/20 and 2034/35 (OBR 2015).

On the other side of the fiscal gap, the shortfall in projected revenues derives principally from the continued shrinking of the tax-paying workforce relative to the population as a whole (see figure 3.2). In the recent past, the inward migration of working age adults (despite its considerable increase) has not kept pace with the growth of the non-working population as a proportion of the total population, and may now, in the wake of the EU referendum result, decline. In effect, a proportionately smaller working-age population will be required to pay for a larger (and more expensive) non-working one.

FIGURE 3.2

The proportion of the non-tax paying population is projected to continue rising

Projected number of children and pensioners per 1,000 working-age adults, 2014–2050



Source: IPPR calculations based on ONS 2014.

Note: the chart uses the ONS’s ‘principal’ population projections.

The ageing of the population has more than just fiscal impacts. The UK has a major ‘pension gap’: household pension savings rates are well below the levels required to provide the incomes that most people expect in retirements that will be longer than ever before. It is estimated that people retiring between 2017 and 2057 may need to save an additional £365 billion each year in order to achieve an adequate income in retirement – a figure equivalent to 13 per cent of GDP (Aviva 2016).

Slow growth in tax revenues is also linked to broader weaknesses in the UK economy – most notably the slow rate of economic growth, which (as discussed above) is itself a reflection of the economy’s relatively weak levels of investment, productivity and exports. It is notable that the OBR’s central forecasts do not account for future economic downturns, despite the UK’s recent experience of a recession on average once every 5–15 years (Whittaker 2016). Any significant downturn – for example, as a consequence of the UK’s impending exit from the EU – would increase the budget deficit, as tax receipts would fall and the so-called ‘automatic stabilisers’ of higher welfare spending would kick in. (This spending is not counted as part of ‘managed expenditure’ in the government accounts, since it varies according to the condition of the economy.) Such a downturn would make the projected deficit even larger.

Indeed, any increase in planned government borrowing will also have this effect. While it is not yet clear to what extent the new government intends to change its fiscal stance, it has already signalled the potential for increased borrowing for capital investment, such as on infrastructure (Hammond 2016). With average yields on 10-year government bonds still at very low levels despite recent market turbulence, this is clearly sensible, particularly for investments targeted at raising the long-term rate of growth.

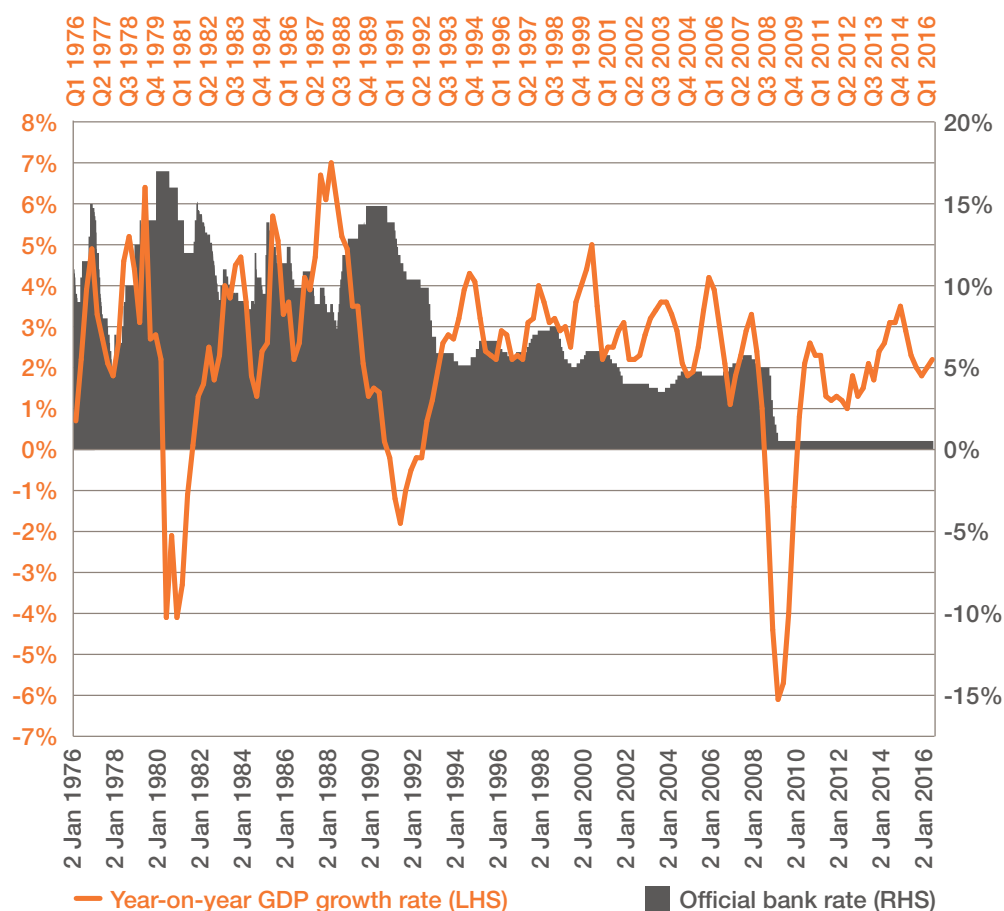
Indeed, a more active fiscal policy may become inevitable in the future as conventional monetary policy reaches its limits. One of the striking trends of the last 40 years has been the secular decline in interest rates. A pattern has emerged in which, when economic growth slows or moves into recession, interest rates are lowered in order to stimulate consumer demand and business investment; but each time, interest rates have tended not to recover to their pre-recession levels before being cut again in response to the next downturn (see figure 3.3). As a result, the economy has adjusted to cheaper credit, with each subsequent downturn requiring a looser monetary policy while starting from an ever-lower base. Although the relative *stability* of interest rates in the 1990s and 2000s was positive, they settled at an average rate that was too low to keep saving and consumption in an appropriate balance. Since 2009, this process has culminated in interest rates reaching their floor, or ‘effective lower bound’, beyond which further reductions bring little marginal benefit to the wider economy. The base rate today stands at an unprecedented 0.25 per cent, with the Bank of England indicating that it could fall further still – to 0.10 per cent – in the coming months. Most economists believe it is unlikely that such a move can produce the desired level of stimulus when faced with the next recessionary risk, even when combined with the continued use of

unconventional monetary policy in the form of quantitative easing. This makes it likely that fiscal policy – government spending and borrowing – will be required to do more of the heavy lifting to stimulate demand in the future.

FIGURE 3.3

The scope for conventional monetary policy to counter slow growth has run out

Quarterly GDP growth (year-on-year, left-hand axis) and Bank of England base rate (right-hand axis), January 1976–June 2016*



Source: ONS 2016d and Bank of England 2016

*Note: Bank of England base rate data shows rates on a daily (working day) basis; growth rate data is shown by quarter.

Closing the fiscal gap will not, therefore, be easy. It will largely depend on how successful governments are at raising the rate of economic growth. Yet even if they succeed in doing so, they may also need to confront the structural gap between government income and expenditure. Cutting public expenditure further will always remain an option, but few observers are confident that it can be done, given both the UK's demographic pressures and the extent of the cuts that are already planned by 2020/21; the latter will see total public spending fall by more than 8 percentage points of GDP compared with 2009/10 (OBR 2016a).

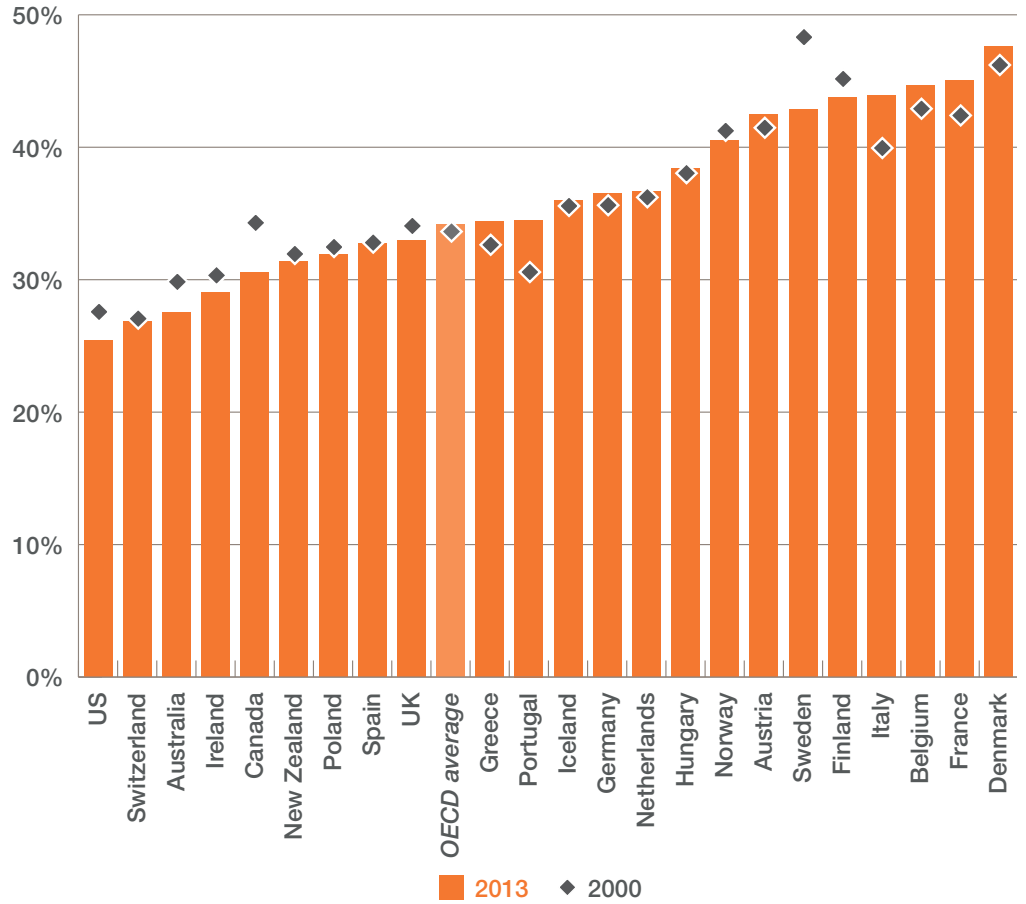
The remaining option would be to raise the overall rate of taxation. The UK's tax receipts are, as a proportion of GDP, below those of most of our European neighbours (see figure 3.4). If the country wishes to maintain its social spending at levels comparable to those of other European countries, it may have to raise its levels of taxation commensurately. A number of options for tax reform have been proposed over recent years, mostly focused on simplification, greater progressivity and increasing the taxation of wealth (Commission on Taxation and Citizenship 2000, Mirrlees et al 2011, Bennett 2015). But for all the attention this area has received, few of these principles have been put into practice through actual changes to the system. The field might, therefore, helpfully be revisited. At the same time, there is evident scope for further closing the sizeable 'tax gap' between the liabilities owed to the government and those actually collected by HM Revenue and Customs. This gap has a number of causes, including tax avoidance and evasion. The scale of corporate tax avoidance, including the use of offshore tax havens and complex accounting techniques to transfer global profits to low-tax jurisdictions, has come to the fore in recent years (Shaxson 2012). The UK's heavily international service-based economy is particularly vulnerable. Government estimates put the tax gap at £34 billion a year, or 6.4 per cent of total tax liabilities (HMRC 2015), but others estimate that it is far higher – potentially up to £120 billion (Murphy 2014).

A final point is worth emphasising. Across the economy as a whole, all saving and borrowing must balance. So if the government deficit declines, other sectors of the economy (households, firms and the 'rest of the world') will have to make up the difference. If the UK's current account deficit (which equates to net lending by the rest of the world) persists, and if the corporate sector remains a net lender, then falling public deficits will necessarily require households to become even more indebted than they are today – indeed, consumer borrowing could potentially grow beyond even the levels reached prior to the financial crash (see figure 3.5). This would be historically unprecedented, and almost certainly unsustainable. It suggests, in turn, that raising the level of corporate investment and reducing the trade deficit, as discussed in previous chapters, need to become central economic priorities. If these objectives are not pursued, any attempt to balance the government's books will almost certainly fail.

FIGURE 3.4

The share of UK GDP taken in tax is lower than in most other European economies

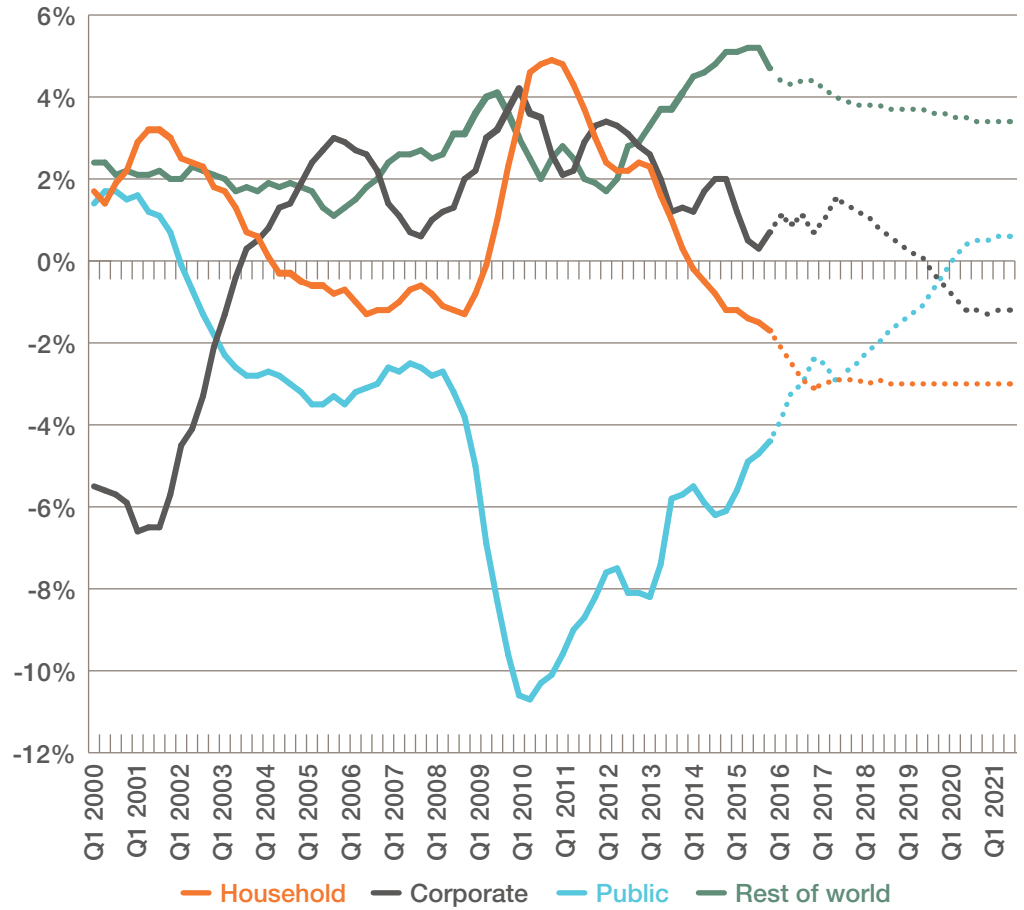
Tax receipts as a proportion of GDP (%), selected OECD countries, 2000 and 2013



Source: data from OECD 2016d

FIGURE 3.5

As the government deficit declines, other sectors of the economy need to increase their net borrowing to maintain overall balance
UK sectoral net lending (% of GDP), outturn, and government projections, 2000–2021*



Source: OBR 2016b

*Note: dotted lines indicate government projections as opposed to actual net lending, from Q4 2015 onwards.

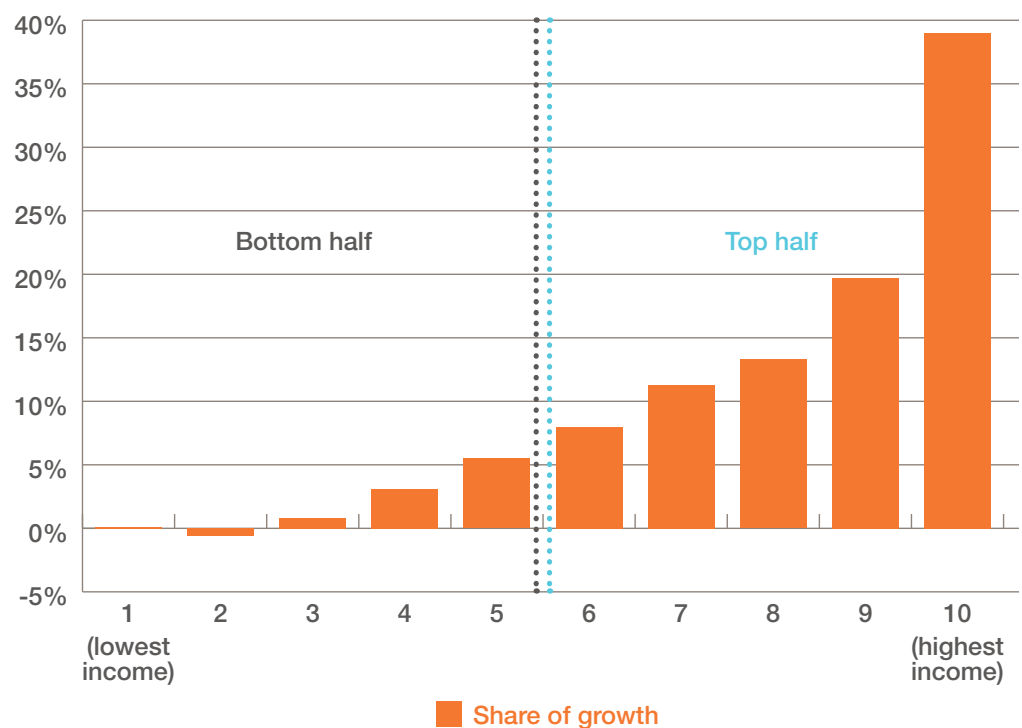


Construction workers take a break, Birmingham

SYMPTOM 4: THE INCOME PROBLEM

FIGURE 4.1

The pre-tax, pre-benefit incomes of the poorest half of the population have barely benefited from overall economic growth
Share (%) of the growth in real original household incomes* among economically active households between 1979 and 2012, by income decile)



Source: Bailey et al 2015

*Note: 'original incomes' are defined as incomes prior to any taxes or benefits.

The growth of the UK economy delivers highly unequal rewards.

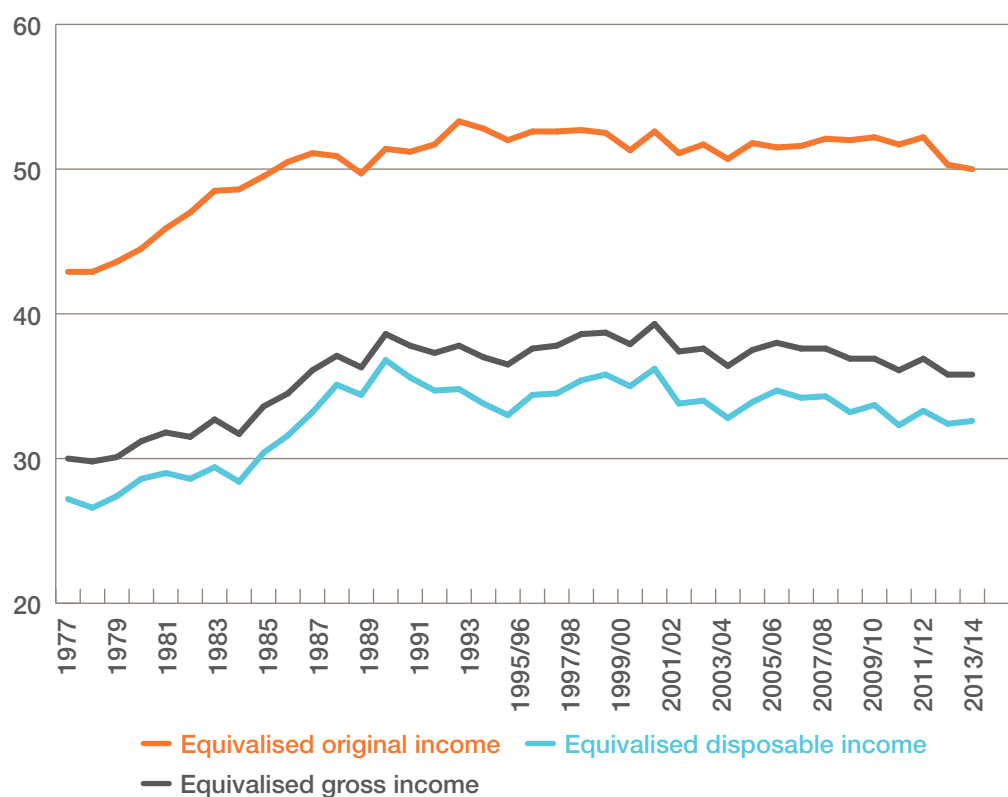
As figure 4.1 shows, before taxes and government transfers are taken into account, only 10 per cent of overall income growth between 1979 and 2012 went to the bottom half of the household income distribution; those in the bottom third of the distribution barely shared in the growth at all. Meanwhile, the richest 10 per cent took almost 40 per cent of the total (Bailey et al 2015).

Importantly, figure 4.1 shows the gains from growth *before* the impact of taxes and benefits, which help to redistribute income. As figure 4.2 shows, in the decade after 2002, the welfare, tax credit and pension policies of the Labour government had some effect in terms of reducing inequality in gross and disposable household incomes, relative to original incomes. In the years since 2011/12, the continued growth in pensioner incomes, coupled with a rise in employment, has seen household income inequality remain stable

(Belfield et al 2016). In neither of these periods, however, has policy been able to get close to reversing the steep rise in inequality that occurred in the 1980s. The result, as figure 4.3 illustrates, is that the UK is among the most unequal of advanced economies. The incomes of the richest 10 per cent of UK households are, on average, 11 times higher than those of the poorest 10 per cent. In Germany and France, the difference is a factor of seven, and in Denmark it is a factor of just five (OECD 2016e).

FIGURE 4.2

Social policy since 2002 has achieved a small reduction in inequality, but the steep rise that occurred in the 1980s has not been reversed
Gini coefficients for original, gross and disposable equivalised household income in the UK, 1977-2013/14*



Source: ONS 2016e: figure 6

Note: 'original incomes' are defined as incomes prior to any taxes or benefits; 'gross incomes' are defined as income prior to tax but after the inclusion of benefits; 'disposable incomes' are defined as incomes after taxes and benefits. 'Equivalised' incomes are adjusted for the number of members in a household.

*Where 0 = perfect equality, and 100 = perfect inequality.

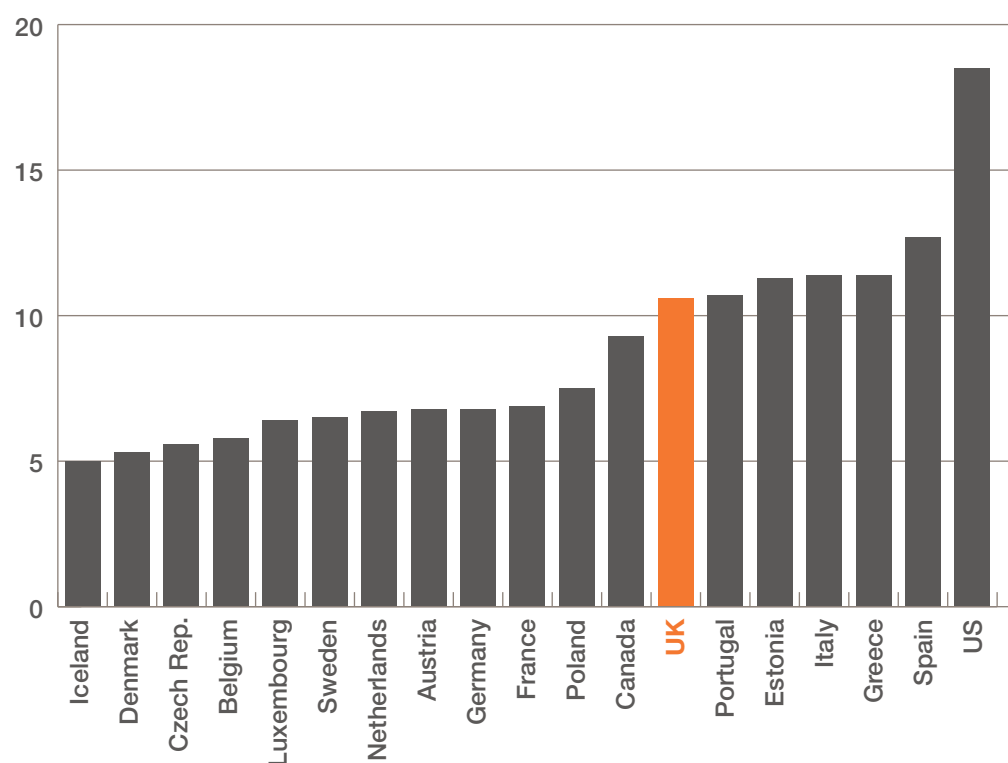
Some of the trends that have had the effect of increasing inequality in the UK are common to almost all developed economies. Technological change and the globalisation of production have increased the wage premium attached to higher skill levels, and have therefore sharpened the earnings gradient between those more and less highly educated (Goldin and Katz 2010). Lower skilled jobs have been markedly more subject to competition, both from developing economies and from inward migration, than higher skilled jobs. Across the advanced economies, the share of GDP going to labour (wages

and salaries) declined by 9 per cent on average between 1980 and 2007, with a parallel rise in the share accounted for by profits (Stockhammer 2013).

FIGURE 4.3

The UK is more unequal than most European economies

Ratio in average disposable income of the top 10 per cent compared with that of the bottom 10 per cent, OECD countries, 2013*



Source: OECD 2016e

*Note: all OECD countries for which comparable data is available are shown.

However, some specific features of the UK economy may also have contributed to our rise in inequality. The shift from relatively highly paid jobs in manufacturing sectors to relatively low-paid jobs in the service sector has been more dramatic in the UK than in some of our competitor countries. At the same time, the UK’s relatively high employment rate has (perhaps unsurprisingly) been accompanied by lower wage growth. It is notable, for example, that worklessness is no longer the principal cause of poverty: two-thirds of children living in poverty today live in households in which at least one adult works (Belfield et al 2016). It is likely that the UK’s low rate of unionisation outside the public sector has also contributed to the decline in labour’s share of national income.

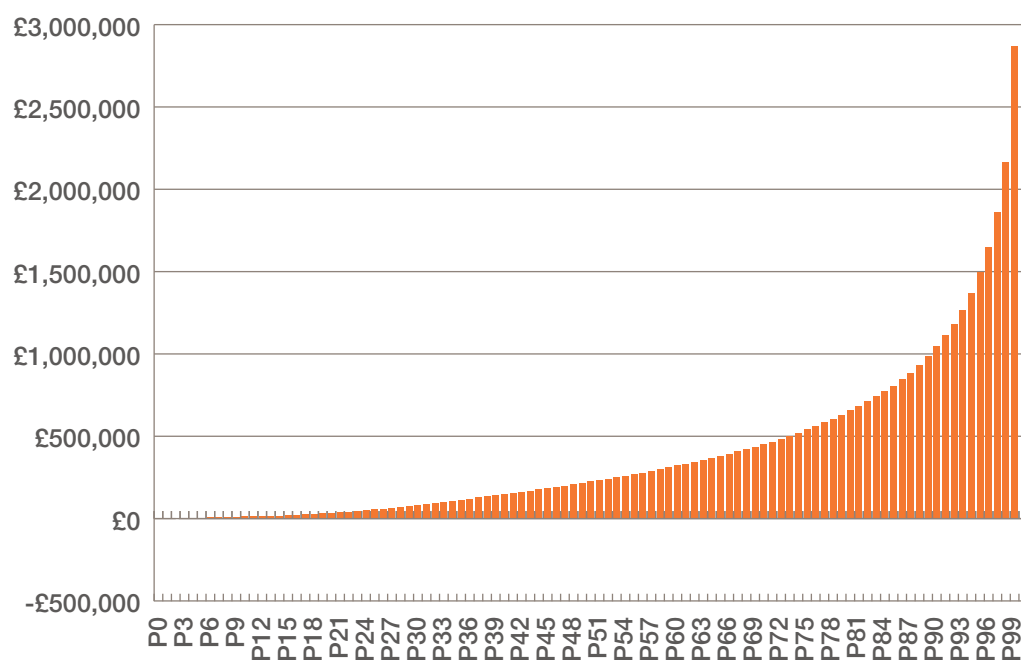
At the same time, the continued rise in the share of total incomes going to the very top 1 per cent of the income distribution in the UK appears to be due in part to the UK’s financial sector being larger than those of other economies (many of these high incomes are paid by this sector), and in part to the structure of executive pay. Top executive incomes are notably higher in the UK than they are in comparable European countries (High Pay Commission 2011). A highly unequal distribution of wealth – largely

due to property price inflation – is an additional factor (see figure 4.4): because wealth typically gains higher returns than labour over time, the rise in wealth inequality has further exacerbated income inequality. This is true even *within* the richest percentile of the population: the incomes of the richest 0.1 per cent grew significantly faster than those of the top 1 per cent as a whole between 1990 and 2012 (Jenkins 2015).

FIGURE 4.4

Wealth inequality remains sharp

Distribution of total household wealth by percentile points, Great Britain, July 2012–June 2014



Source: ONS 2015a: figure 2

There are also other forms of income gap. The pay gap between men and women, while falling, remains significant (see figure 4.5). Median pay among full-time workers is 10 per cent higher for men than it is for women (ONS 2015b: figure 8). At the same time, women are around 80 per cent more likely to engage in unpaid labour (OECD 2016f). Average employment rates for ethnic minorities are also presently around 12 percentage points lower than those of the white population (ONS 2016f), while the incomes of non-white ethnic groups range between 7 and 47 percentage points lower than those of the white majority (ONS 2015c).

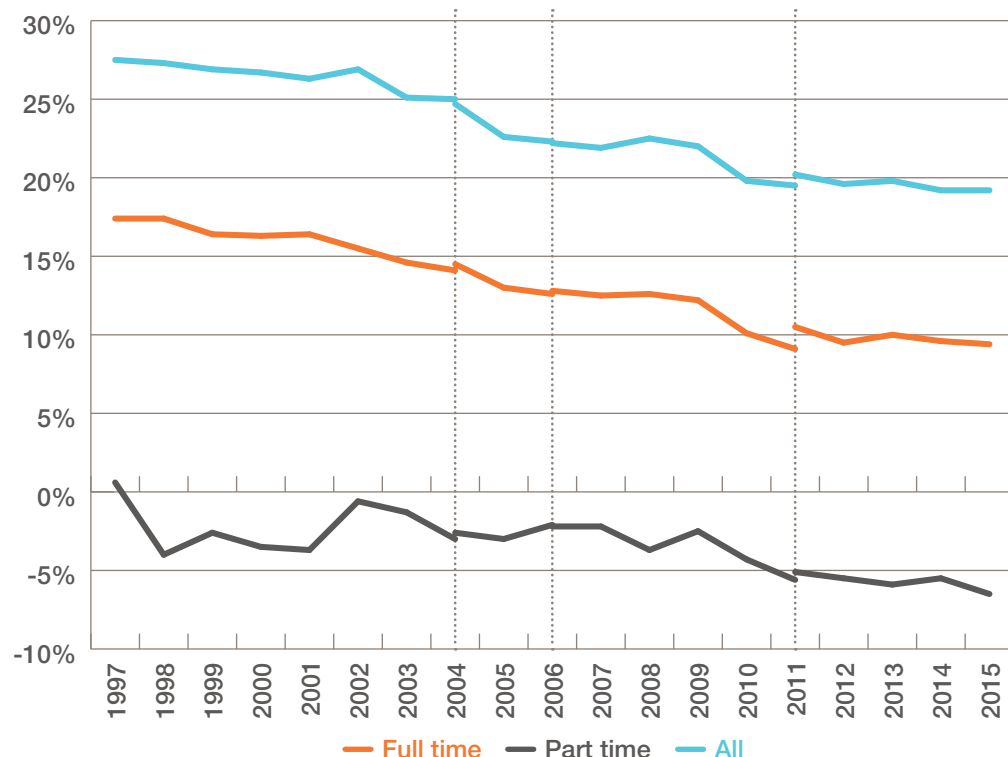
The UK’s income gap is now widely acknowledged to be a problem. There is a pervasive sense among the general public that the economy no longer ‘works for everyone’ – a sense that seems to have been responsible in part for the loss of trust in the political and business establishment manifested most obviously in the result of the EU referendum. The very legitimacy of an economy that distributes its rewards disproportionately and increasingly towards those at the very

top of the income distribution – and in which the living standards of the majority have essentially stagnated for a decade – is clearly in question.

FIGURE 4.5

The gender pay gap has remained stubbornly high

Difference in median gross hourly earnings for men and women in the UK by employment type (excluding overtime), 1997–2015



Source: data from ONS 2015b: figure 8

Note: series breaks (vertical dotted lines) represent discontinuities in 2004, 2006 and 2011 Annual Survey of Hours and Earnings (ASHE) estimates.

However, there are also social and economic causes for concern. There is now good evidence that more unequal societies suffer from lower average wellbeing, with lower levels of mental and physical health and lower levels of social cohesion (Wilkinson and Pickett 2010). Moreover, recent research by the International Monetary Fund and the Organisation for Economic Co-operation and Development suggests that inequality tends to be correlated with poor economic growth performance (Ostry and Berg 2011, Cingano 2014). Inequality tends to reduce demand and to result in excessive saving, since those on lower incomes tend to spend and the rich to save. In turn, this effect may be compounded by monetary authorities' response to weak demand – lowering interest rates, which helps to fuel asset bubbles.

Reducing inequality may, therefore, be a valuable means of improving not just the perceived fairness of the economy and how it works, but its productive performance as well. Doing so will require that attention is paid not just to taxation and social welfare policies that redistribute original incomes, but also to the sectoral composition of the economy, and the structures of both labour markets and executive remuneration.



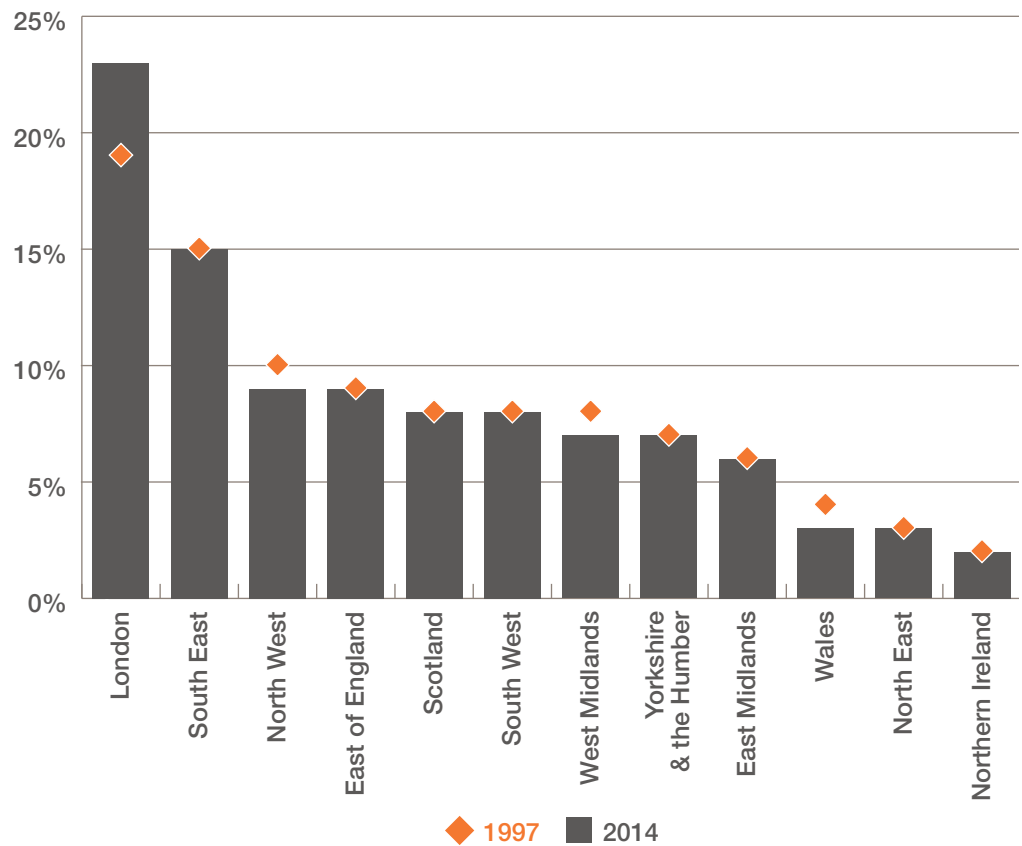
Custard Factory,
Birmingham

SYMPTOM 5: THE REGIONAL PROBLEM

FIGURE 5.1

London and the South East are responsible for almost 40 per cent of total UK output

Percentage of UK GVA by region/nation, 1997 and 2014



Source: ONS 2015d

Note: total UK GVA used in the calculation of regional proportions excludes the extra-region and statistical discrepancies as defined by the ONS (2015d).

The UK has a highly geographically imbalanced economy. London accounts for almost a quarter of national output, with the rest of the South East contributing another 15 per cent (ONS 2015d). This geographical concentration has grown over the last 20 years: the population, productivity and output growth of the UK economy have all shifted south-east (Hughes 2013).

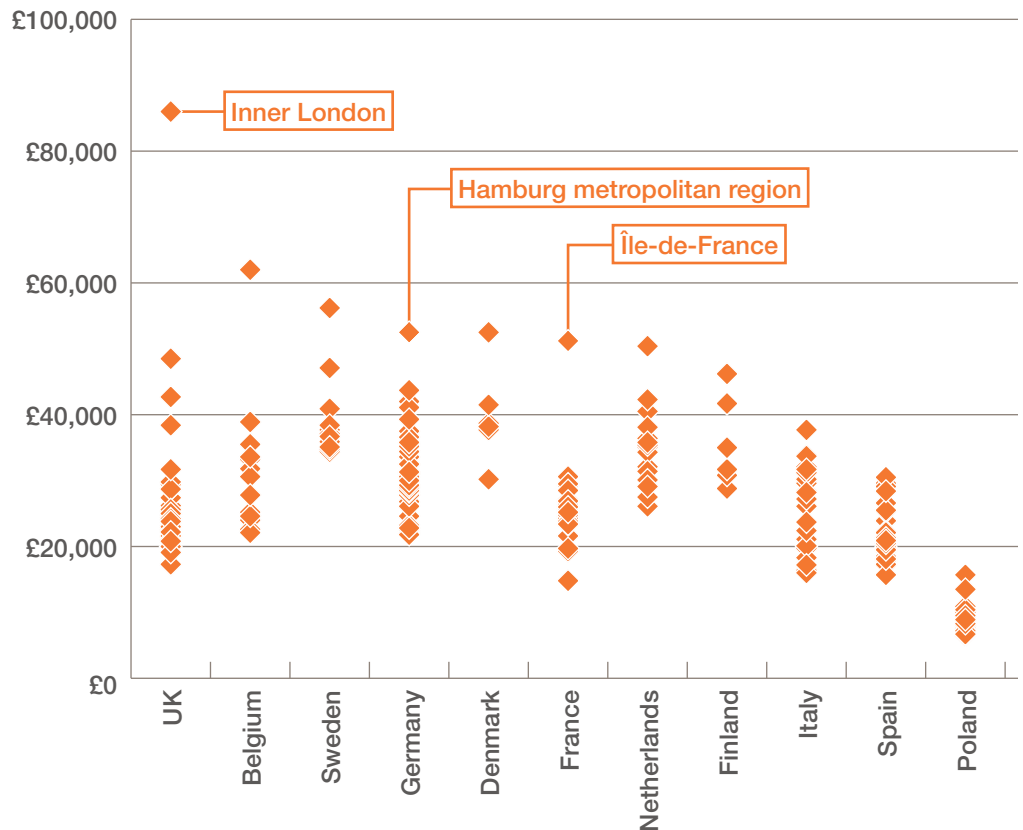
The UK economy is not alone in experiencing growing regional concentration. However, as with many trends common to all advanced economies, the UK's is an extreme version. After accounting for variations in the population, the scale of the UK's regional imbalance is

unprecedented among European countries. The points on the graph in figure 5.2 represent output per capita for each geographic region within a given country. While London is by far the wealthiest European region by this measure, more than a quarter (26 per cent) of UK regions have lower output per capita than almost every other region in northern Europe.

FIGURE 5.2

The UK is more economically imbalanced than other countries, even after accounting for variations in population

Output (GVA) per capita (€) by region for selected European countries, 2011



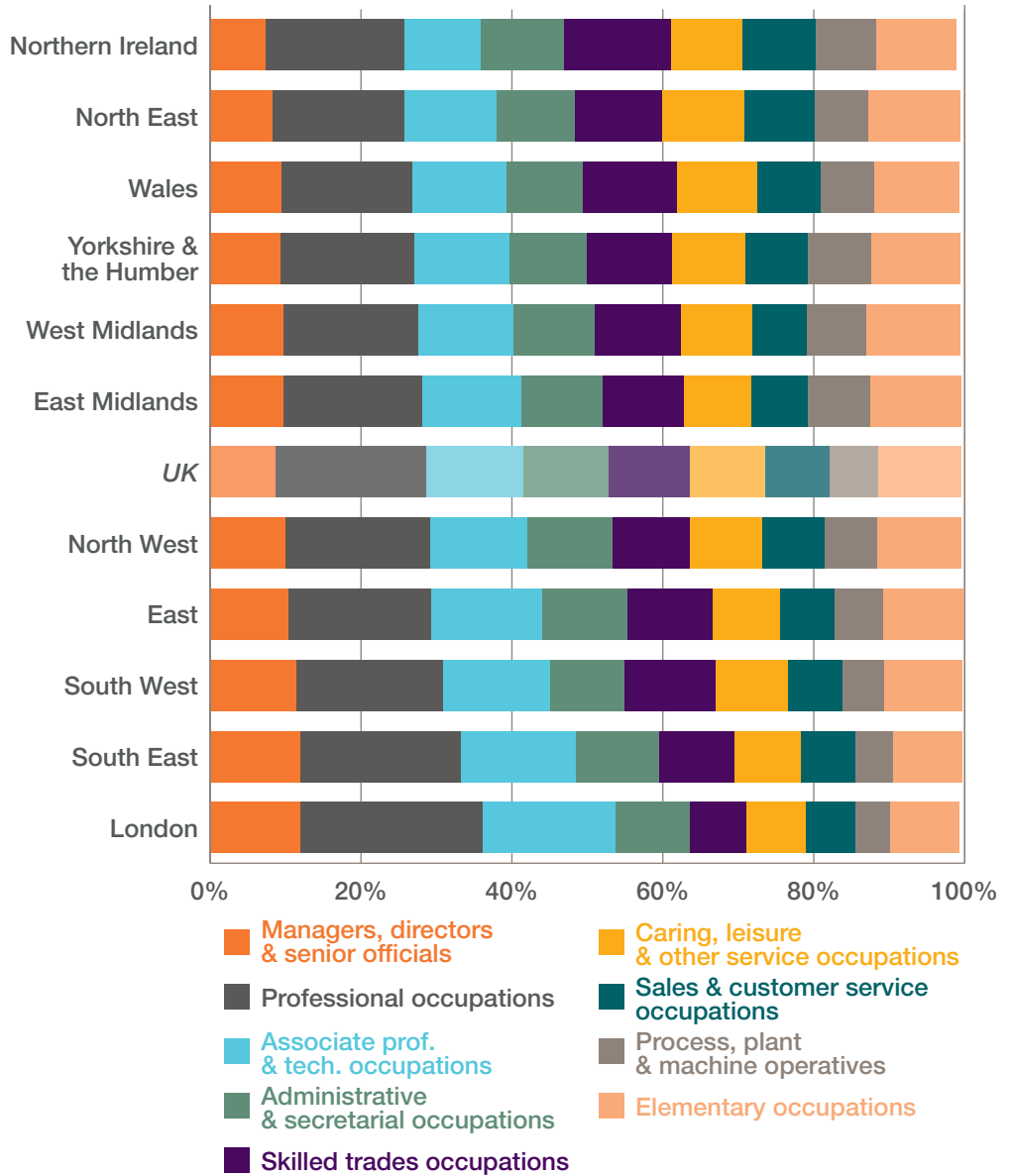
Source: data from Eurostat 2016

Two factors in particular have contributed to the UK's regional imbalance. The first is that before the financial crisis, the composition of the UK economy shifted away from manufacturing and towards the financial and service sectors to a much greater extent than those of most other economies (Buchanan et al 2009). With much of the UK's traditional manufacturing located in the north of England, Wales and Scotland, and new industrial centres growing in the South East (around Cambridge and the M4 corridor, for example), this shift led to a relocation of economic activity. London's self-reinforcing growth as a global financial centre has brought with it feedback and spillover effects across private investment, education and training, inflows of overseas talent and the relocation of associated industries. As a result, 'higher skill' jobs in managerial and professional occupations are disproportionately concentrated in London and the rest of the South (see figure 5.3).

FIGURE 5.3

London is the only region in which more than half of jobs are managerial or professional

Percentage of all employees within UK regions/nations by Standard Occupational Classification, 2010



Source: data from Nomis 2016

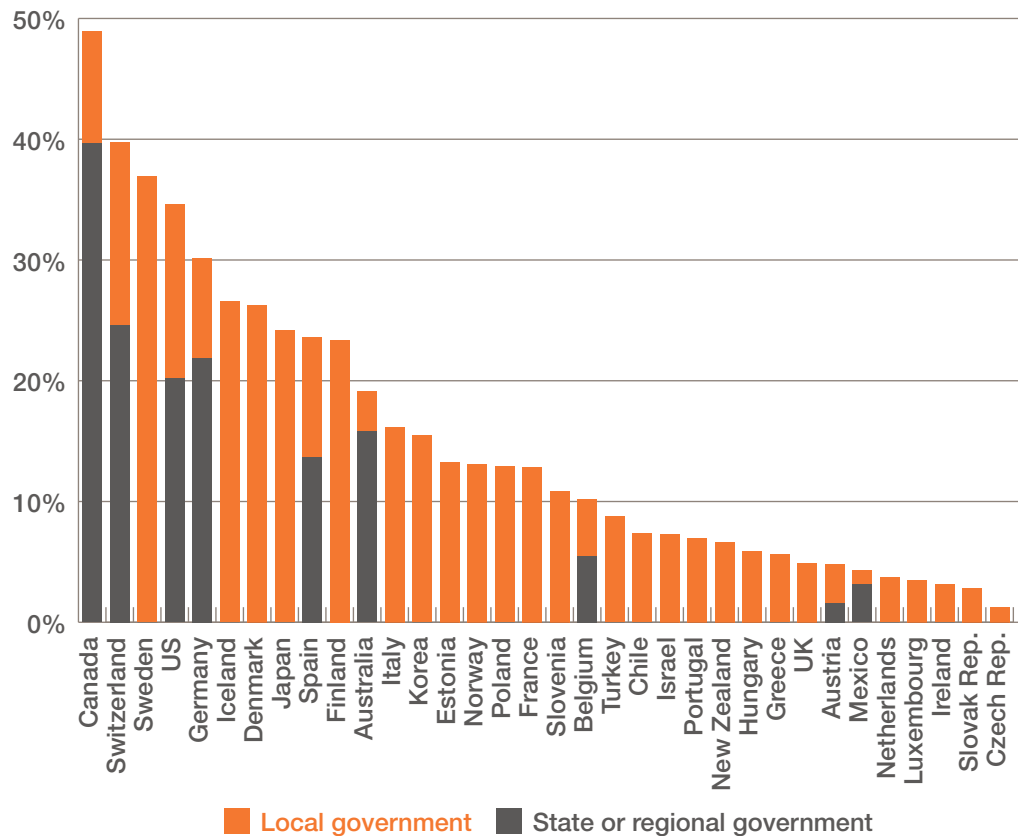
The second factor relates to levels of governance and the distribution of public resources. The UK affords its regions much less administrative power than most other European countries do, with no ‘regional’ tier of governance within England. This is reflected, notably, in powers over taxation. As figure 5.4 illustrates, the UK’s local and regional government tiers have much less power to collect tax than their counterparts in the majority of OECD countries. (This is perhaps even more remarkable given that the UK is one of the largest countries by population in the OECD.) Unsurprisingly, powers of governance are correlated with the

distribution of public resources. It is notable that, since devolution and the creation of a London mayor, Scotland, Wales, Northern Ireland and London have each received around twice as much public investment per head as the rest of England outside London (Cox and Raikes 2015).

FIGURE 5.4

The UK collects less tax at the subnational level than most developed countries

Local- level, and regional- or state-level, tax collection as a percentage of all tax revenue within OECD countries, 2013



Source: OECD 2015

It has sometimes been argued that public resources for economic growth are best focused on major cities, where ‘agglomeration’ effects can be reinforced. This has helped justify the focusing of UK infrastructure resources on London. Over the next four years, for example, the Department for Transport’s infrastructure plans will see £1,870 per person spent in London, but just £280 per person in the north of England (IPPR North 2016). However, over the last decade-and-a-half, evidence has emerged from Europe showing that mid-sized cities can also achieve rapid growth in activity and output, particularly where high levels of connectivity exist (McCann 2013, Parkinson et al 2012). At the same time, the growth of new technologies has made it possible to site industrial and service sectors in smaller towns and rural areas as well (IPPR North 2016).

The UK outside London therefore has significant economic potential for growth. The north of England alone has five major cities, home to 11 million people: if it were a country in its own right, it would be the eighth-largest economy in Europe (Clifton et al 2016). Scotland's economy also enjoys a far better sectoral balance than the UK as a whole, with almost half of jobs created since the recession being outside the service sector (Gunson et al 2016). A sharper public policy focus on encouraging investment in the UK's regions outside London and the South East – through infrastructure spending, skills and industrial policy, and the devolution of economic and taxation powers – has the potential to deliver significant benefits not just to those regions, but to the UK economy as a whole.



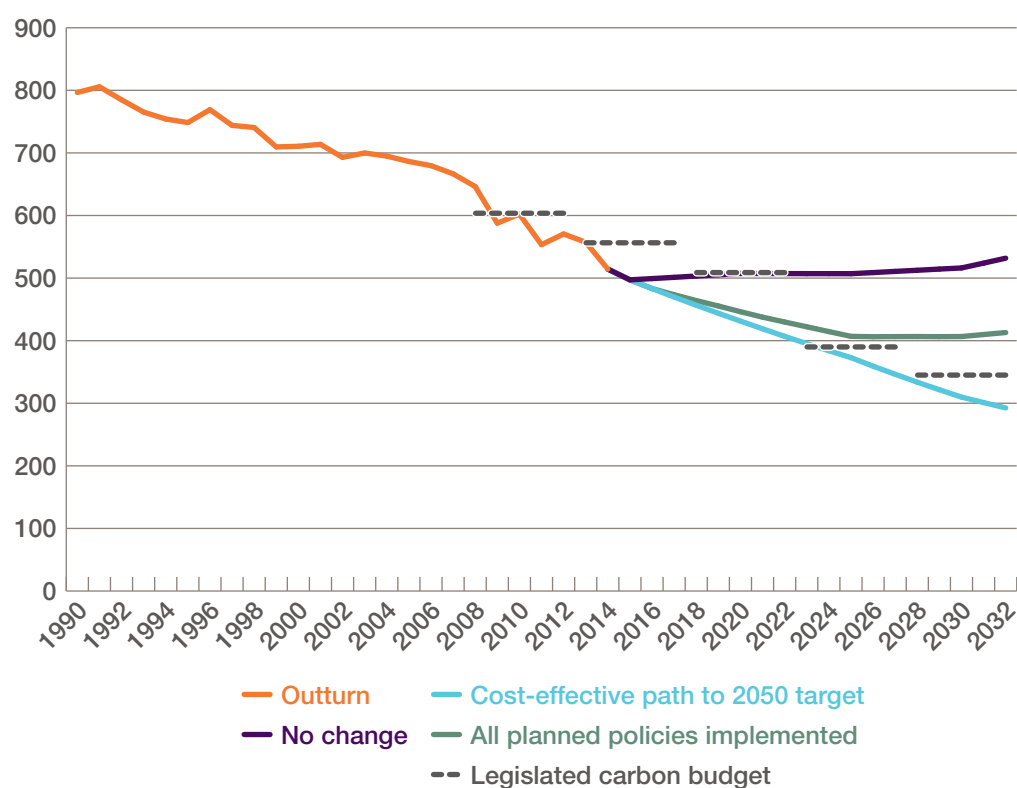
**Abbotts Rippon,
Cambridgeshire –
the largest solar
farm in the UK**

SYMPTOM 6: THE CARBON PROBLEM

FIGURE 6.1

With its current policies, the UK will not achieve its 2030 or 2050 greenhouse gas emissions targets

UK greenhouse gas emissions (MtCO₂e), actual (to 2014) and projected (from 2015), 1990–2030*



Source: data sourced from CCC 2016a, 2016b and DBEIS 2016'

*Note: 'MtCO₂e' = 'Million tonnes of carbon dioxide equivalent'.

Since the passage of the Climate Change Act in 2008, the UK has made considerable progress in terms of cutting greenhouse gas (GHG) emissions. However, we are not on track to meet the statutory targets laid down by parliament. The Committee on Climate Change (CCC) has warned that there is a gap of around 100 MtCO₂e (million tonnes of carbon dioxide equivalent) between the emissions that will result from current government policies, and the emissions path required in order to meet the statutory 'fifth carbon budget' (specifying total permissible emissions) for 2028–2032. That 100 MtCO₂e gap represents fully 47 per cent of the total emissions reductions required to achieve the budget. What's more, a further 55 MtCO₂e of emissions reductions (25 per cent of the total required) are at risk of not being

achieved without additional funding and further definition of policy. This, in turn, puts the UK off the trajectory it needs to follow in order to meet the long-term 2050 carbon target set out in the Climate Change Act in 2008 (CCC 2016c).

The framework for emissions reductions laid down by the Climate Change Act requires the government to set a carbon budget every five years which covers a five-year period beginning between 12 and 17 years in the future, taking the advice of the independent CCC. That budget must be passed by parliament. In recommending the level at which carbon budgets are set, the CCC is required to take account of the latest climate science, the appropriate contribution of the UK to EU and international efforts to tackle climate change, and the technological feasibility and economic costs of emissions reductions (including their impact on competitiveness and fuel poverty, and their fiscal and social implications). On the basis of these criteria, the CCC has set out (and periodically adjusted) a 'least cost path' to the 2050 target laid down in the Act.

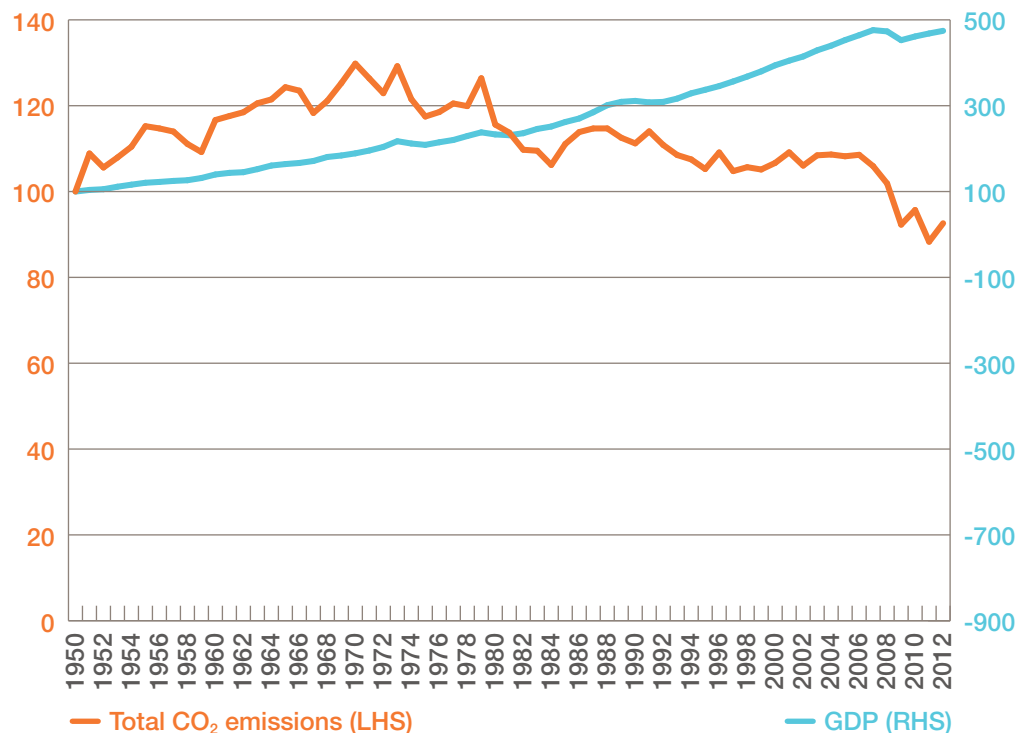
The 2050 target is for at least an 80 per cent reduction in emissions relative to 1990 levels. That would cut UK per-capita emissions to around 2 MtCO₂e, which is the global per-capita average required if emissions in that year are to fall to half of 1990 levels. When the Act was passed, such a reduction was regarded as offering an acceptable possibility of holding the average rise in global temperature to no more than 2°C above pre-industrial times. The Paris agreement on climate change, signed in December 2015, has, however, revised the long-term global goal, committing the international community to phasing out net greenhouse gas emissions altogether in the second half of the century. ('Net' emissions allow for the possibility of some capture and sequestration, whether by biological or geological means.) The Intergovernmental Panel on Climate Change estimates that, for a 66 per cent likelihood of holding warming below 2°C, net emissions of carbon dioxide would need to reach zero sometime between the 2050s and 2070s. That suggests, as the government has acknowledged, that the UK's 80 per cent reduction target for 2050 will have to be tightened in future (CCC 2016d).

Since 1990 the UK's emissions have been 'decoupled' from economic growth (see figure 6.2), with emissions falling steadily even while GDP has risen. (Over the last three years, emissions have fallen by an average of 4.5 per cent a year.) Three forces have been at work here.

- The first is a structural change in the composition of UK production and consumption, away from energy- and material-intensive goods towards less intensive services. This change is itself the result partly of technological change and changing tastes, and partly of the globalisation of production and the effective 'exporting' of UK manufacturing emissions.
- Second, there has been a marked increase in the efficiency of energy use, stimulated both by higher energy prices and by active energy efficiency policies.
- Third, the electricity system has begun to be decarbonised.

FIGURE 6.2

The trend in CO₂ emissions has been decoupled from economic growth
Indexes for UK CO₂ emissions and GDP, 1950–2012 (1950 = 100)



Source: IPPR calculations using data sourced from ONS 2016g and World Bank 2016c

Less than a decade ago, in 2009, the UK sourced 74 per cent of its power from fossil fuels (coal, gas and oil), with just 7 per cent coming from renewables and 20 per cent from nuclear. By 2015 renewables – largely wind, solar and biomass – accounted for 26 per cent of total generation, and the share of fossil fuels had fallen to just 54 per cent (CCC 2016d). As a result of this, the average carbon intensity of the UK power system had been reduced to 370gCO₂/Kwh in 2015, and is expected to fall further to between 200 and 225gCO₂/Kwh by 2020. Yet to meet the CCC’s least-cost path of emissions reduction, further rapid reductions will need to be made during the 2020s, to below 100gCO₂e/kwh by 2030 (ibid). As the CCC has observed, the policy framework currently in place will not deliver this. New policies are required to bring forward wind and solar generation after 2020; to provide for new storage, interconnection and demand response options; and to stimulate investment in carbon capture and storage (ibid).

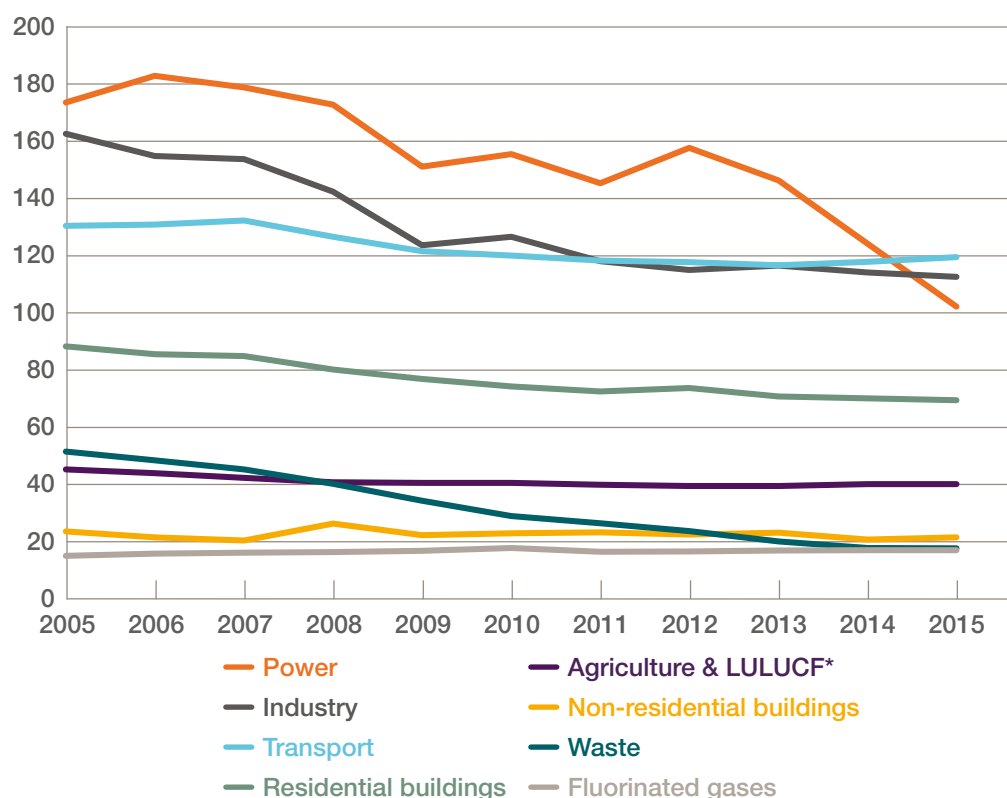
Furthermore, the progress made towards the decarbonisation of the power sector has not been matched in the other principal sectors responsible for GHG emissions. As figure 6.3 shows, aside from power, only industrial emissions have significantly contributed to the UK’s overall reduction of GHG emissions since 2005. Emissions from buildings (heating and cooling) and transport have declined only

slightly over this period, and have barely fallen over the last four years (CCC 2016d).

The uptake of low-carbon heating systems (heat pumps and district heating networks) remains particularly low, at around 2.5 per cent of heating supply. Transport is now the highest emitting sector, with emissions rising as demand outpaces both efficiency improvements and the uptake of electric vehicles and biofuels (ibid). Without a specific industrial strategy aimed at reducing emissions in energy-intensive sectors – including through the use of carbon capture and storage – little progress will be made (Lawrence and Stirling 2016). The CCC notes that in none of these sectors are current policies close to sufficient to meet their required contribution to future carbon budgets (CCC 2016d).

FIGURE 6.3

The UK’s overall emissions reductions have largely been due to decarbonisation of the power sector, particularly since 2012
UK greenhouse gas emissions (MtCO₂e) by sector, 2005–2015



Source: CCC 2016d: figure 1

*Note: 'LULUCF' = 'land use, land-use change and forestry'.

The upshot of this is that, while the UK’s emissions have been on a trajectory consistent with meeting the first three carbon budgets set by parliament (for 2008–2012, 2013–2017 and 2018–2022), they are not on track to meet either the fourth (2023–2027, set at a 51 per cent reduction on 1990 levels) or the fifth (2018–2032, a 57 per cent reduction). The CCC sets out 16 areas in which new policies are required to meet these

budgets, and 14 in which stronger implementation of existing policy is needed (CCC 2016d). It notes that the cost of meeting them will be less than 1 per cent of GDP (with additional health and environmental benefits estimated at between 0.1 and 0.6 per cent of GDP) (ibid). Given the potential for the further development of UK low-carbon industries and supply chains in response to new climate and energy policies, there is a strong argument for making decarbonisation one of the key elements of any new approach to industrial strategy.



A Deliveroo cycle courier

THE IPPR COMMISSION ON ECONOMIC JUSTICE

As the preceding chapters have shown, these six symptoms of the UK's economic failings are longstanding. They arise from core features of the economy's structure and institutional make-up. And they are interconnected. Weak investment and productivity are partly a product of the UK's relatively low share of capital-intensive manufacturing, which in turn contributes to the trade gap. Low productivity helps keep average household wages low, particularly outside London and the South East. Low wages lead to higher levels of debt, incurred to support consumption, which makes the fiscal gap harder to close. The fiscal and investment gaps make tackling the carbon gap through public and corporate investment more difficult. In each field, there are short-term policy approaches that can help ameliorate the symptom identified. However, the enduring nature of these problems, and the relationships between them, suggests that more fundamental reform of the UK economy will be required if they are to be properly addressed.

The prospect of Brexit makes such reform even more imperative, since it places some key elements of the UK economy – notably inward investment and the financial sector – at risk. However, it also provides an opportunity. Because the risks are significant, the appetite for deeper economic policy reform may be greater. It is already notable that, in the wake of the referendum result, the idea that recent patterns of globalisation and change have created an economy that no longer 'works for everyone' has become widely accepted across the political spectrum. New kinds of policy to address underlying weaknesses, such as industrial strategy and corporate governance reform, are suddenly on the agenda, with cross-party support.

The IPPR Commission on Economic Justice is a major two-year programme that will rethink the way the British economy works.¹ Comprising leading figures from across the economy in business, finance, technology, trade unions, academia and civil society (see the annex to this report), the Commission will conduct a comprehensive examination of the UK economy, set out a long-term vision for its future, and make wide-ranging policy recommendations for its reform.

The Commission will look not just at the implications of Brexit, but at the next wave of globalisation and technological change, including new global trade and investment patterns and the increasingly rapid development of robotics and machine intelligence. It will look at recent trends in labour markets, such as the growth of self-employment, zero-hours contracts and migration. It will examine both the economy's productive potential and the ways in which it distributes rewards, and

¹ See <http://www.commissiononeconomicjustice.org>

how these are connected. Cutting across the six gaps identified in this report, its research and policy development programme will examine the following issues, among others.

- The case for a new national economic policy, including a vision of the economy that we want to have in 2030, and how we should measure economic success.
- The need for a new macroeconomic framework, including new principles and institutions for fiscal and monetary policy, and for infrastructure financing.
- How a fairer distribution of wealth and ownership, for households and employees, can be achieved.
- How the taxation system should be reformed to deliver greater fairness, efficiency and economic incentives, and to tackle tax avoidance and evasion.
- How to build stronger British firms, including through corporate governance reform, industrial strategy and new approaches to policy in the fields of trade, innovation, skills and labour markets.
- The role of public policy in harnessing and shaping developments in science and technology in order to improve economic performance and human wellbeing.
- The devolution of economic policy to the UK's nations and regions, and the complementary roles of national and subnational institutions.

During the course of its work the Commission will seek evidence from a variety of sources, including stakeholders from business, trade unions, civil society and academia. It will seek to understand the economy as it is experienced by people working in different sectors and different roles across the country, and will formulate its recommendations in response. The Commission will organise a series of events and publish a number of working papers prior to the publication of its final report in autumn 2018.

As the country faces up to its post-Brexit future, it is clear that the UK economy needs fundamental reform – a rewriting of the rules – if it is to generate more sustainable economic growth and a more broadly shared prosperity. The aim of the IPPR Commission on Economic Justice is to show how that can be achieved.

REFERENCES

- Aviva (2016) *Mind the gap: Quantifying the pension savings gap in Europe*. http://www.aviva.com/media/upload/Aviva_Mind_the_Gap_2016_Quantifying_the_pension_savings_gap_in_Europe_HJ9aexB.pdf
- Bailey D, Cowling K and Tomlinson P (2015) *New Perspectives on Industrial Policy for a Modern Britain*, Oxford University Press
- Bank of England (2016) 'Statistical Interactive Dataset - official Bank Rate history' dataset. Accessed via <http://www.bankofengland.co.uk/boeapps/iadb/Repo.asp>
- Belfield C, Cribb J, Hood A and Joyce R (2016) *Living standards, poverty and inequality in the UK: 2016*, Institute for Fiscal Studies. <https://www.ifs.org.uk/publications/8371>
- Bennett F (2015) 'Still paying for progress?', in Srblin D-R (eds) *Values added: Rethinking tax for the 21st century*, Fabian Society. http://www.fabians.org.uk/wp-content/uploads/2015/02/ValuesAdded_Web.pdf
- Buchanan J, Froud J, Johal S, Leaver A and Williams K (2009) 'Undisclosed and unsustainable: problems of the UK national business model', CRESC working paper no. 75, Centre for Research on Socio-Cultural Change, Open University. <http://www.cresc.ac.uk/medialibrary/workingpapers/wp75.pdf>
- Cingano F (2014) 'Trends in Income Inequality and its Impact on Economic Growth', OECD social, employment and migration working papers no. 163, Organisation for Economic Co-operation and Development. <http://dx.doi.org/10.1787/5jxrjncwxv6j-en>
- Clifton J, Raikes L and Round A (2016) *Northern schools: Putting education at the heart of the northern powerhouse*, IPPR North. <http://www.ippr.org/publications/northern-schools-putting-education-at-the-heart-of-the-northern-powerhouse>
- Commission on Taxation and Citizenship (2000) *Paying for progress: A new politics of tax*, Fabian Society
- Committee on Climate Change [CCC] (2016a) 'Meeting Carbon Budgets – 2016 Progress Report to Parliament', supporting data: 'Chapter 1: Economy-wide progress', *Meeting Carbon Budgets – 2016 Progress Report to Parliament*. <https://www.theccc.org.uk/publication/meeting-carbon-budgets-2016-progress-report-to-parliament/>
- Committee on Climate Change [CCC] (2016b) 'Meeting Carbon Budgets – 2016 Progress Report to Parliament', supporting data: 'Chapter 2: Power', *Meeting Carbon Budgets – 2016 Progress Report to Parliament*. <https://www.theccc.org.uk/publication/meeting-carbon-budgets-2016-progress-report-to-parliament/>
- Committee on Climate Change [CCC] (2016c) *UK Climate Action Following the Paris Agreement*. <https://www.theccc.org.uk/wp-content/uploads/2016/10/UK-climate-action-following-the-Paris-Agreement-Committee-on-Climate-Change-October-2016.pdf>
- Committee on Climate Change [CCC] (2016d) *Meeting Carbon Budgets – 2016 Progress Report to Parliament*. <https://www.theccc.org.uk/wp-content/uploads/2016/06/2016-CCC-Progress-Report.pdf>
- Cox E and Raikes L (2015) *The state of the North 2015: Four tests for the northern powerhouse*, IPPR North. <http://www.ippr.org/publications/the-state-of-the-north-2015>
- Davies R, Haldane A, Nielsen M and Pezzini S (2013) 'Measuring the costs of short-termism', *Journal of Financial Stability* 12: 16–25
- Department for Business, Energy and Industrial Strategy [DBEIS] (2016) 'Final UK greenhouse gas emissions national statistics: 1990-2014', dataset. Accessed via <https://www.gov.uk/government/collections/final-uk-greenhouse-gas-emissions-national-statistics>
- Department for Business, Innovation and Skills [BIS] (2012) 'Industrial strategy: UK sector analysis', BIS economics paper no. 18. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/34607/12-1140-industrial-strategy-uk-sector-analysis.pdf

- Dolphin T (2014) *Gathering strength: Backing clusters to boost Britain's exports*, IPPR. <http://www.ippr.org/publications/gathering-strength-backing-clusters-to-boost-britains-exports>
- Dolphin T and Hatfield I (2015) *The missing pieces: Solving the UK's productivity puzzle*, IPPR. <http://www.ippr.org/publications/the-missing-pieces-solving-the-uks-productivity-puzzle>
- Dolphin T, Nash D and Silim A (2011) *The state of the economy*, IPPR. <http://www.ippr.org/publications/the-state-of-the-economy>
- Eurostat (2016) 'Gross domestic product (GDP) at current market prices by NUTS 2 regions', dataset. Accessed via <http://appsso.eurostat.ec.europa.eu/nui/>
- Goldin C and Katz L F (2010) *The Race between Education and Technology*, Belknap Press
- Griffith-Jones S and Cozzi G (2016) 'Investment-led Growth: A Solution to the European Crisis', in Jacobs M and Mazzucato M (eds) *Rethinking Capitalism: Economic Policies for Equitable and Sustainable Growth*, Wiley-Blackwell
- Gunson R, Hatfield I and McGeoghegan M (2016) *Jobs and skills in Scotland: Addressing productivity, progression and in-work poverty*, IPPR Scotland. <http://www.ippr.org/publications/jobs-and-skills-in-scotland-addressing-productivity-progression-and-in-work-poverty>
- Haldane A G (2016) 'Whose recovery?', text based on a speech delivered in Port Talbot, 30 June 2016. <http://www.bankofengland.co.uk/publications/Pages/speeches/2016/916.aspx>
- Hammond P (2016) 'Full text: Philip Hammond's conference speech', *Spectator*, 3 October 2016. <http://blogs.spectator.co.uk/2016/10/full-text-philip-hammonds-conference-speech/>
- Hardie M, Jowett A, Marshall T and Wales P (2013) 'Explanation beyond exchange rates: Trends in UK trade since 2007', Office for National Statistics. <http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/rel/elmr/explanations-beyond-exchange-rates/trends-in-the-uk-since-2007/art-uktrade.html>
- High Pay Commission (2011) *Cheques With Balances: why tackling high pay is in the national interest*. http://highpaycentre.org/files/Cheques_with_Balances.pdf
- HM Revenues and Customs [HMRC] (2015) *Measuring tax gaps 2015 edition*. <http://webarchive.nationalarchives.gov.uk/20160612044958/https://www.gov.uk/government/statistics/measuring-tax-gaps>
- HM Treasury [HMT] (2016) 'Statement by the Chancellor of the Exchequer, George Osborne following the outcome of the EU referendum', speech delivered 27 June 2016. <https://www.gov.uk/government/speeches/statement-by-the-chancellor-following-the-eu-referendum>
- House of Commons Business, Innovation and Skills Committee [HoC-BISC] (2016) 'Committee launches inquiry into Government's industrial strategy', press release, 1 August 2016. <https://www.parliament.uk/business/committees/committees-a-z/commons-select/business-innovation-and-skills/news-parliament-2015/industrial-strategy-launch-16-17/>
- Hughes A (2013) *Short-termism, impatient capital and finance for manufacturing innovation in the UK: Future of Manufacturing Project: Evidence Paper 16*, Foresight, Government Office for Science. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/283883/ep16-manufacturing-short-termism-capital-finance.pdf
- International Trade Centre [ITC] (2014) 'Trade statistics', dataset. Accessed via <http://www.intracen.org/itc/market-info-tools/trade-statistics/>
- IPPR North (2016) 'Transport Secretary urged to close £1,600 per person London-North spending gap', press release, 8 August 2016. <http://www.ippr.org/news-and-media/press-releases/transport-secretary-urged-to-close-1-600-per-person-london-north-spending-gap>
- Jenkins S (2015) *The income distribution in the UK: A picture of advantage and disadvantage*, Institute for Social and Economic Research. <https://www.iser.essex.ac.uk/research/publications/working-papers/iser/2015-01.pdf>
- Lawrence M and Stirling A (2016) *Strong foundation industries: How improving conditions for core material producers could boost UK manufacturing*, IPPR. <http://www.ippr.org/publications/strong-foundation-industries>

- McCann P (2013) 'The North East in a Global Context: Challenges and Opportunities', presentation, North Eastern Independent Economic Review, 15 February 2013
- Mirrlees J, Adam S, Besley T, Blundell R, Bond S, Chote R, Gammie M, Johnson P, Myles G and Poterba J (2011) *Tax by Design: The Mirrlees Review*, Oxford University Press
- Murphy R (2014) *The tax gap: Tax evasion in 2014 and what can be done about it*, Public and Commercial Services Union. <http://www.taxresearch.org.uk/Documents/PCSTaxGap2014.pdf>
- Nomis (2016) 'Annual population survey', dataset. Accessed via <https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=17>
- Office for Budget Responsibility [OBR] (2015) 'Fiscal sustainability report supplementary data series - June 2015', dataset. Accessed via <http://budgetresponsibility.org.uk/efo/economic-fiscal-outlook-march-2016/>
- Office for Budget Responsibility [OBR] (2016a) 'Public finances databank', dataset. Accessed via <http://budgetresponsibility.org.uk/data/>
- Office for Budget Responsibility [OBR] (2016b) 'Economic and fiscal outlook charts and tables - March 2016', dataset. Accessed via <http://budgetresponsibility.org.uk/data/>
- Office for National Statistics [ONS] (2014) 'Table A1-1, Principal Projection - UK Summary', dataset. Accessed via <http://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/tablea11principalprojectionuksummary>
- Office for National Statistics [ONS] (2015a) 'Main results from the Wealth and Assets Survey: July 2012 to June 2014'. http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/dcp171776_428683.pdf
- Office for National Statistics [ONS] (2015b) 'Annual Survey of Hours and Earnings: 2015 Provisional Results'. <http://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/2015provisionalresults#gender-pay-differences>
- Office for National Statistics [ONS] (2015c) 'FOI response: Weekly disposable household income by ethnicity, tax years 1994/1995 to 2012/2013,UK'. <https://www.gov.uk/government/publications/weekly-disposable-household-income-by-ethnicity-tax-years-19941995-to-20122013uk>
- Office for National Statistics [ONS] (2015d) 'Regional Gross Value Added (Income Approach)'. <http://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/regionalgrossvalueaddedincomeapproach>
- Office for National Statistics [ONS] (2016a) 'Gross Domestic Product: q-on-q4 growth rate CVM SA %', dataset. Accessed via <http://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/ihyr/pgdp>
- Office for National Statistics [ONS] (2016b) 'Labour Productivity time series dataset', dataset. Accessed via <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/datasets/labourproductivity>
- Office for National Statistics [ONS] (2016c) 'Balance of Payments time series dataset', dataset. Accessed via <https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/datasets/balanceofpayments>
- Office for National Statistics [ONS] (2016d) 'Gross Domestic Product: q-on-q4 growth rate', dataset. Accessed via <https://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/ihyr/pn2>
- Office for National Statistics [ONS] (2016e) 'Household disposable income and inequality: financial year ending 2015'. <http://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/bulletins/householddisposableincomeandinequality/financialyearending2015>
- Office for National Statistics [ONS] (2016f) 'A09: Labour market status by ethnic group' 17 August 2016, dataset. Accessed via <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/labourmarketstatusbyethnicgroupa09>
- Office for National Statistics [ONS] (2016g) 'Gross Domestic Product: chained volume measures: Seasonally adjusted £m', dataset. Accessed via <http://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/abmi/pgdp>

- Organisation for Economic Co-operation and Development [OECD] (2015) 'Table D. Attribution of tax revenues to sub-sectors of general government as % of total tax revenue', 'Revenue Statistics - taxes by level of government'. <http://www.oecd.org/tax/tax-policy/revenue-statistics-levels-of-government.htm>
- Organisation for Economic Co-operation and Development [OECD] (2016a) '8A. Capital formation by activity ISIC rev4, SNA93', dataset, OECD.stat. Accessed via https://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE8A_SNA93
- Organisation for Economic Co-operation and Development [OECD] (2016b) 'Value added by activity', dataset, OECD.stat. Accessed via <https://data.oecd.org/natincome/value-added-by-activity.htm>
- Organisation for Economic Co-operation and Development [OECD] (2016c) 'Level of GDP per capita and productivity', dataset, OECD.stat. Accessed via <https://data.oecd.org/natincome/value-added-by-activity.htm>
- Organisation for Economic Co-operation and Development [OECD] (2016d) 'Revenue Statistics - OECD countries: Comparative tables', dataset, OECD.stat. Accessed via <https://stats.oecd.org/Index.aspx?DataSetCode=REV>
- Organisation for Economic Co-operation and Development [OECD] (2016e) 'Income Distribution and Poverty', dataset, OECD.stat. Accessed via <https://stats.oecd.org/Index.aspx?DataSetCode=IDD>
- Organisation for Economic Co-operation and Development [OECD] (2016f) 'Employment: Time spent in paid and unpaid work, by sex', dataset, OECD.stat. Accessed via <http://stats.oecd.org/index.aspx?queryid=54757>
- Ostry J and Berg A (2011) *Inequality and Unsustainable Growth : Two Sides of the Same Coin?*, International Monetary Fund. <https://www.imf.org/external/pubs/cat/longres.aspx?sk=24686.0>
- Parkinson M, Meegan R, Karecha J, Evans R, Jones G, Tosics I, Gertheis A, Tönko A, Hegedüs J, Illés I, Sotarauta M, Ruokolainen O, Lefèvre C and Hall P (2012) *Second Tier Cities in Europe: In An Age of Austerity Why Invest Beyond the Capitals?*, ESPON and European Institute of Urban Affairs, Liverpool John Moores University
- Shaxson N (2012) *Treasure islands: Tax havens and the men who stole the world*, Vintage
- Stockhammer E (2013) *Why have wage shares fallen? A panel analysis of the determinants of functional income distribution*, International Labour Office. http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_202352.pdf
- Tomorrow's Company (2016) *UK Business: What's wrong? What's next? Creating value for shareholders and society through a focus on purpose, values, relationships and the long term*. <http://tomorrowscompany.com/wp-content/uploads/2016/05/UK-Business-Whats-wrong-Whats-next.pdf>
- Whittaker M (2016) *Renewed Interest: The role of monetary policy in crisis and beyond*, Resolution Foundation. <http://www.resolutionfoundation.org/publications/renewed-interest-the-role-of-monetary-policy-in-crisis-and-beyond/>
- Wilkinson R and Pickett K (2010) *The Spirit Level: Why Equality is Better for Everyone*, Penguin
- World Bank (2016a) 'Gross fixed capital formation (% GDP)', dataset. Accessed via <http://databank.worldbank.org/data/reports.aspx?source=2&series=NE.GDI.FTOT.ZS&country>
- World Bank (2016b) 'Research and development expenditure (% GDP)', dataset. Accessed via <http://databank.worldbank.org/data/reports.aspx?source=2&series=GB.XPD.RSDV.GD.ZS&country>
- World Bank (2016c) 'CO2 emissions (kt)', dataset. Accessed via <http://databank.worldbank.org/data/reports.aspx?source=2&series=EN.ATM.CO2E.KT&country=#>

ANNEX: MEMBERS OF THE IPPR COMMISSION ON ECONOMIC JUSTICE

Dominic Barton, Global Managing Partner, McKinsey and Company

Sara Bryson, Community Organiser, Tyne & Wear Citizens, Citizens UK

Matthew Clifford MBE, Co-founder and CEO, Entrepreneur First

Charlie Cornish, Group Chief Executive, Manchester Airports Group Plc

Claire Dove OBE, DL, Chief Executive, Blackburne House Group

Lord John Eatwell, President, Queens' College, University of Cambridge;
Professor Emeritus, Judge Business School

Grace Gould, Entrepreneur in Residence, LocalGlobe

Sandra Kerr OBE, Race Equality Director, Business in the Community

Lord Bob Kerslake, Chair of London's King's College Hospital NHS
Foundation Trust; former Head of the Civil Service

Tom Kibasi, Director, IPPR

Catherine McGuinness, Deputy Chairman, Policy and Resources
Committee, City of London Corporation

Juergen Maier, Chief Executive Officer, Siemens UK

Sir Charlie Mayfield, Chairman, John Lewis Partnership

Professor Mariana Mazzucato, RM Phillips Professor in the Economics
of Innovation, SPRU, University of Sussex

John Mills, Founder and Chairman, JML

Helena Morrissey CBE, Chair of Newton Investment Management and
the Investment Association, Founder of the 30% Club

Frances O'Grady, General Secretary, Trades Union Congress

Stephen Peel, Founder, SMP Policy Innovation

Mary Senior, Scotland Official, University and College Union

Mustafa Suleyman, Co-founder and Head of Applied AI, DeepMind

Sally Tallant, Director, Liverpool Biennial Festival of Contemporary Art

Neera Tanden, President, Center for American Progress

The Most Revd and Rt Hon Justin Welby, Archbishop of Canterbury,
Church of England; Head of the worldwide Anglican Communion