

Measuring up for levelling up

*What are we trying to achieve by “levelling up”?
And what does the data say about what’s happening in
different places?*



Neil O’Brien MP



ONWARD➤

About Onward

Onward is a campaigning thinktank whose mission is to develop new ideas for the next generation of centre right thinkers and leaders. We exist to make Britain fairer, more prosperous and more united, by generating a new wave of modernising ideas and a fresh kind of politics that reaches out to new groups of people. We believe in a mainstream conservatism – one that recognises the value of markets and supports the good that government can do, is unapologetic about standing up to vested interests, and assiduous in supporting the hardworking, aspirational and those left behind.

Our goal is to address the needs of the whole country: young as well as old; urban as well as rural; and for all parts of the UK – particularly places that feel neglected or ignored in Westminster. We will achieve this by developing practical policies that work. Our team has worked both at a high level in government and for successful thinktanks. We know how to produce big ideas that resonate with policymakers, the media and the public. We will engage ordinary people across the country and work with them to make our ideas a reality.

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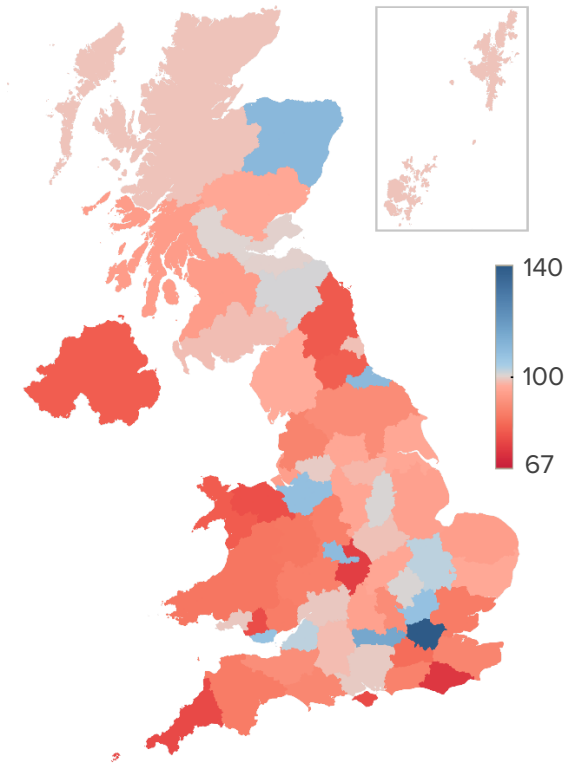
Executive summary



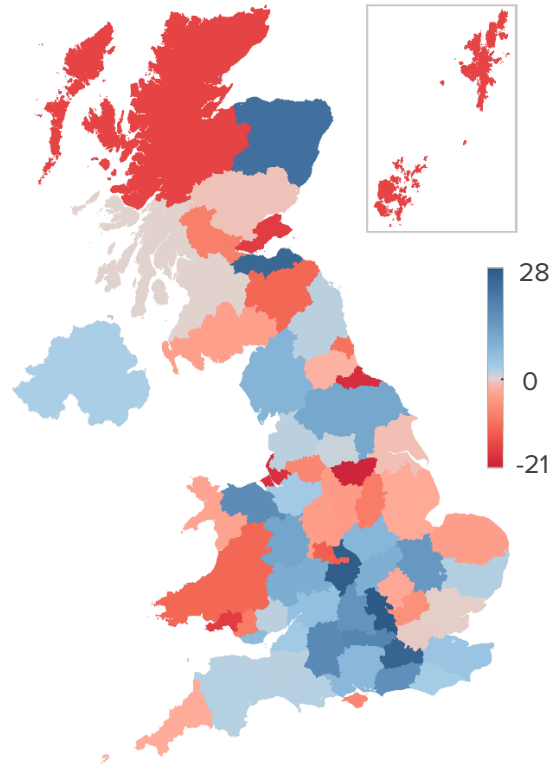
Divergence in two phases

1970s to 1990s: Deindustrialisation and the rise of the south east

GDP per capita, 1977, UK = 100

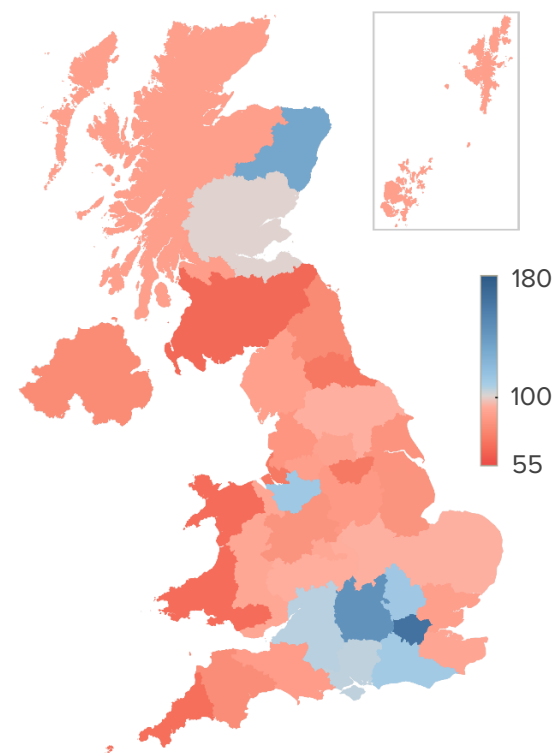


Change in GDP per capita, 1977-1995, relative to UK average

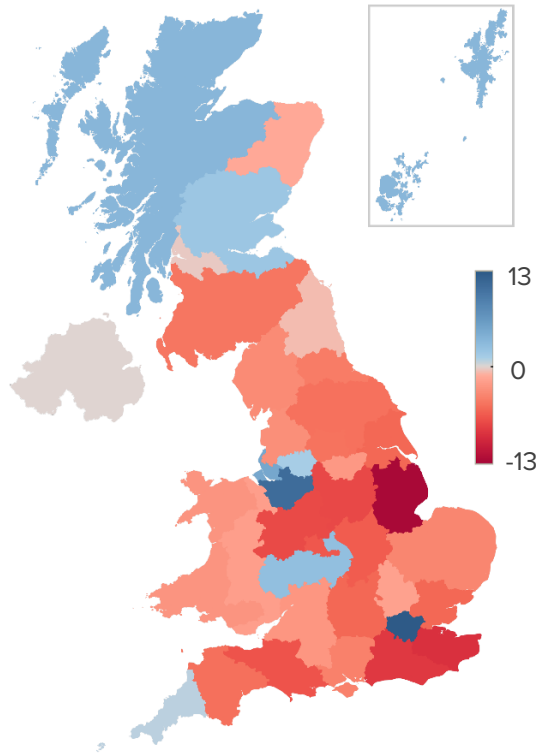


1990s – present: London pulling ahead of the rest of England and Wales

GVA per capita, 1998, UK = 100



Change in GVA per capita, 1998-2018, relative to UK average



The map of British politics has been transformed. The seats gained by the Conservative party in 2019, many for the first time, are quite different to seats the party has traditionally held.

Seats gained by the Conservatives in 2019 don't just have lower earnings than the seats the party already held, but earnings 5% lower than seats held by Labour¹. Of the bottom quarter of seats in Great Britain with the lowest earnings, more are now held by the Conservatives than Labour. The seats the party gained in 2019 had lower employment rates than Labour-held seats, and higher unemployment rates². Compared to the Conservative gains, homes in seats held by Labour were £62,000 (a third) more expensive.³

The traditional patterns of British politics have profoundly changed, and that partly reflects profound economic and demographic changes which have been happening in this country over decades.

The new government is committed to “levelling up” poorer places. But what does that mean, and how can we best measure if we are succeeding?

This paper reviews what has been changing in the UK economy over time and explores how different measures of the economy reveal different trends in the pattern of growth across the nation. Learning from this, it suggests how we can best measure progress in levelling up.

Key findings

Growth in the UK economy has diverged over time

Having been the same size as the economy of the north of England as recently as 2004, London's GDP is now a quarter bigger. London's economy before the coronavirus crisis was the size of the North plus Edinburgh, Swansea, Belfast, Bristol and Birmingham: it is as though it has added all those national and regional capital cities to itself since the middle of the last decade.

Fast growth in the south and London partly reflects a huge southward shift in the population over many decades. Before the second world war roughly a fifth of the population lived in the south of England outside London, while twice as many lived in the North and Scotland taken together. Now equal numbers live in both – around a third of the population. Since the mid-1980s London has seen a huge resurgence in its population: between 1981 and 2018 the population of London increased by nearly a third (31%) while that of the north east grew by less than 1%.

¹ Average of 2017-2019

² Figures for 2019, 16+ employment rate

³ Figures for 2019

Output and living standards per person have also diverged over time.

Pre-tax and benefit income per person in London grew two thirds faster than the rest of the country between 1997 and 2018. Pre-tax and benefit income is now nearly 70% higher in London than the rest of the country, up from 30% higher in 1997.

The divergence seen since the mid-1990s has primarily been between London and the rest of the country. But it follows an earlier period between the 1970s and the mid-1990s in which former industrial areas in the north, midlands, Scotland and Wales fell behind and the greater south east improved its position. Between 1977 and 1995 South Yorkshire, Teesside and Merseyside saw GDP per person fall by 20% compared to the national average, and most such areas affected by deindustrialisation have not caught up the lost ground.

Divergence at the top, convergence at the bottom

The divergence in earnings between richer areas and the rest of the country is much greater for those higher up the income distribution. In 2019 poorer Londoners (at the 10th percentile of the earnings distribution) earned just 13% more than those at the 10th percentile nationally, but richer Londoners (those at the 90th percentile) earned 42% more than the national average.

There has been convergence between regions at the bottom end of the earnings distribution, driven by things like the National Living Wage and tax and benefit reforms which have reduced differences between regions by levelling up poorer areas more. But there has been divergence at the top where these factors have limited impact. Looking at the gap between earnings for fulltime workers in London and the North East, the pay gap *shrank* for the bottom 30% of workers but *grew* for those higher up. For those at the 10th percentile the pay gap shrank from 32% to 20%. But for those at the 90th percentile it grew from 62% to 88%. You could say that whether incomes are converging or diverging economically depends on who you are.

Divergence has happened despite more redistribution

Although incomes have diverged the tax-benefit system is doing more to redistribute income than before. 22% of the UK population live in local authorities where income is 20% or more below the national average, compared to 14% in 1997. But before tax and benefits the gaps are bigger and the divergence has been greater: 22% of the UK population live in local authorities where primary income before tax and benefits is 20% or more below the national average, compared to 35% in 1997.

To put it another way, in 2018 around 31% of people lived in local authorities which saw the actions of the tax benefit system boost local income by 5% of the national average or more, up from 20% in 1997. This may reflect demographic divergence, economic divergence and policy changes.

Profound demographic divergences may make levelling up more difficult

In 1981 London had roughly as many pensioners as the rest of Great Britain – both around 15% of the population. But London got younger even as the rest of the country has aged, and by 2019 just 12% of Londoners were pensioners compared to 20% of the rest of Great Britain. At the sub-regional level divergences were bigger still: Between 2001 and 2019 the share of people who were pensioners in North Norfolk rose from a quarter to a third. But in Tower Hamlets it dropped from just over 9% per cent to just over 6%. Local authorities which had larger proportions of pensioners 20 years ago saw their proportion of pensioners grow faster: we are diverging by age.

London also has a far larger share of graduates in the population. 54% of working age Londoners had a degree in 2019, compared to 38% in the rest of the UK, and the gap with the rest of the country has grown, from London having a quarter (27%) more graduates in 2004 to 43% more in 2019 as the capital sucks in people with degrees. Again, at the sub-regional level the differences are even more pronounced: in North East Lincolnshire, Doncaster, Sandwell, Dudley, Wolverhampton and Blaenau Gwent, less than a quarter of people of working age had a degree in 2019. In Wandsworth, Hammersmith and Fulham it was over 70%.

Opportunity is not evenly spread

In Greater London over 45% of poorer pupils who were eligible for free school meals progressed to higher education in 2018/19. Outside London there were 80 local authorities where richer pupils *not* on free school meals were less likely than this to go to university. Overall, more than 60% go to university in places like Sutton, Hammersmith and Fulham, Slough, Kingston upon Thames, Brent, Kensington and Chelsea, Barnet, Westminster, Redbridge and Harrow. But less than a third go in Knowsley, Portsmouth, Barnsley, North East Lincolnshire, Nottingham, Salford, Hull, Thurrock, Doncaster, the Isle of Wight and Swindon.

The UK is more unbalanced than other economies

On a wide range of measures the UK is one of the most geographically unbalanced developed economies. In Germany 12% of people live in areas where the average income is 10% below the national average, while in the UK 35% do. In Germany 2% of people live in areas with 20% less than the national average income, while in the UK 24% do.

Growth in cities versus towns and shires looks very different depending on what measure we use.

There's been a debate about whether cities, towns or shires are more in need of help. Large cities in the UK grew both their total GDP and their productivity per worker faster than their surrounding areas since 1997. However, on average cities saw *slower* growth in income per resident than their surrounding areas. That may reflect a different and changing composition to the population in the cities compared to the surroundings (e.g. more students, more migrants, different age groups), and/or reflect faster growth in commuting and commuter incomes.

The ONS estimates income levels on a detailed, neighbourhood level and categorises areas by how urban or rural they are. Before housing costs incomes have a u-shaped distribution: people in the largest cities have high incomes, people in smaller cities and towns have lower incomes, while people in villages and rural areas have high incomes. But housing costs are so much larger in large cities that that incomes *after* housing costs are highest in villages, middling in small towns and lower in cities (particularly smaller cities). Neighbourhoods in large conurbations have incomes 2% lower than those in villages before housing costs, but 13% lower after housing costs.

Things are different again for the most remote areas - defined by ONS as “sparse”. In these places, income levels are 17-18% lower, regardless of whether people live in a town or village, suggesting that for these areas poor connectivity is holding down incomes. These areas include the north of Devon and Cornwall, most of central Wales and the Shropshire and Herefordshire, most of Cumbria and the rural north east, along with large parts of North Yorkshire, Lincolnshire and North Norfolk. Even controlling for qualifications, age and sex, these sparse areas have income levels between £600-£1,300 a year lower.

The links between place, economic health and wellbeing need further study, but there is some evidence wellbeing is lower in urban areas after controlling for other factors

Measures of subjective wellbeing are highest in rural areas and lowest in London, but this may reflect the composition and age of the population. It is debatable which factors we should control for to understand the impact of place on wellbeing, but there is some evidence that wellbeing is higher in more rural regions than highly urban ones.

While personal factors like being unemployed or divorced matter more, and a person’s health most of all, after controlling for all other factors the differences between the regions with the highest wellbeing and the lowest (Northern Ireland and London) are comparable to the differences between being a fulltime employee and retired, or between being an owner occupier and a social tenant.

Recommendations

- Given large differences even within individual conurbations, measures of levelling up need to be reliable for smaller areas. People are more likely to understand and identify with smaller areas like local authorities than with large statistical regions which can also conceal large variations within them.
- It should be a priority to produce localised data on living costs so that data on incomes and earnings can be put into real terms.
- Given that different indicators tell such different stories, Government should track a wide range of measures set out in this paper. However, if policy has to focus on a couple of measures, earnings and employment rates allow for more granular and timely analysis for smaller areas than productivity or income, because of the way the data is produced. Both earnings and employment measures are also tightly linked to underlying economic performance and to government policy, and compared to other measures like income demographic factors may affect earnings data less.

- Government should produce geographical analysis of all budgets and fiscal events, setting out the different impact that tax and spending changes will have on different areas. The Treasury's Labour Markets and Distributional Analysis unit should have geographical analysis added to its remit.
- Government should produce a regular annual report which sets out progress across the different dimensions explored in this paper, and should particularly focus on three key tests:
 1. **Are the bottom fifth and bottom half of local authorities by earnings growing their earnings more quickly than they have in recent years?**
 2. **Are the bottom fifth and bottom half of local authorities with the worst unemployment seeing unemployment rates falling and converging with the national average?**
 3. **Are the bottom fifth and bottom half of local authorities with the lowest employment seeing employment rates rising and converging with the national average?**

Introduction



How can we measure whether we are succeeding in levelling up struggling places? What does that even mean? Why do we want to do it? This paper aims to help answer those questions.

This paper looks at:

- The rationale for “levelling up” policies
- What’s happening in different areas around the country
- What the data says about some of the most frequently heard arguments in local growth policy
- How government should measure progress towards levelling up.

It aims to provide a baseline for understanding what’s actually happening in the UK economy, and how that understanding might shape the priorities of the government’s “levelling up” agenda. In particular, it aims to show that if we use different measurements of economic strength and progress, we see quite different patterns which illuminate what’s really happening in different places.

This paper considers data up to the point of the coronavirus pandemic. It is too soon to speculate about the impact that the crisis will have in the long term on different places, as we don’t know what the recovery will look like or what, if any, the lasting effects will be.

Most of this paper looks at “levelling up” in economic terms, which is the main sense in which it is being discussed. We could of course equally look at opportunity, health, relationships and social capital, the quality of the local environment, and this paper will look at education and wellbeing. But the focus here will be the economy.

What are local growth policies?

Over the last century, many governments in Britain and other countries have had policies to improve the economic performance of poorer areas.

At different times and in different places this goal has been expressed differently, from seeking to “level up” weaker areas (an absolute concept) to explicit policies to “equalise” levels of economic activity (a relative one).

Depending on the circumstances, different types of place have come into a particular focus. In some countries there are divergences between very large areas, like the north-south gap in Italy, or the east-west gap in Germany. In Britain the north-south gap has been debated for a long time but policy has normally focussed on smaller areas.

In the 1934 Special Areas Act the priority was getting unemployment down in depressed heavy industrial areas like South Wales, Tyneside, Cumberland and southern Scotland. In the 1970s and 80s there was a particular focus on the “inner cities” in the UK and US. In the 1990s the Blair government announced a “New Deal for Communities” focussed on 39 inner-city neighbourhoods. In contrast, more recent years have seen an apparent revival of city centres and lots of debate in Britain about “struggling towns”.

Policies to help particular areas can involve policies explicitly targeted on those places, but also consideration of what effect the other activities of the state are having on economic

geography. You could think of this as a distinction between “active” or “conscious” or “overt” local growth policies versus “passive” or “automatic.”

Active policies might be things like introducing a tax break which is limited to a particular place, or deciding to back an infrastructure project to help a specific area grow.

Passive or automatic policies, in contrast, are a result of the fact that developed countries have progressive tax systems and redistributive welfare states. These redistribute resources from richer to poorer *areas* as a side effect of redistributing from richer to poorer *individuals*.

Somewhere in the middle between the two are policies explicitly designed to iron out differences between areas, but which operate in an automatic way. These include funding formulas for public services which give more money to disadvantaged areas (wherever they may be), or local government financing formulas which aim to equalise resources. Government can make these more or less redistributive, but formulas are typically focussed on their own policy goals. While problems often go together, an area with a struggling economy may or may not also have problems with its schools, or its health, or with crime.

One tricky issue which will recur through this paper is what we should think of as a natural economic unit. In this paper we will look at everything from large regions with nine million people to small neighbourhoods of just 5,000 people. Looking at larger regions we can miss large variations within them, and people tend to identify with smaller places. On the other hand, when we look at smaller areas, we need to be even more conscious of their interdependencies, and the flows of commuters and income between them. Some smaller places’ successes or struggles are hugely shaped by what’s going on around them.

What drives economic success for a local area?

We can “explain” the success or problems of different areas at different levels.

At the first level, we can explain it in terms of things like the number of highly qualified people who live there, the growth of the working population, or the number of businesses opening or expanding locally, levels of business investment, or spending on R&D and so on. But, in a sense, these answers just push the question back – why do highly qualified people and entrepreneurs want to move there in the first place? Why do investors invest there?

In many cases there are self-reinforcing trends at work: skilled people want to be near other skilled people: partly for social reasons, and partly to be in a labour market with lots of job openings for skilled people. The rise of dual-earner couples may have accentuated this over decades: couples may now be more likely to want to live somewhere where both of them can get good jobs, not just one of them.

The same applies to entrepreneurs, or firms in a particular cluster: Saville Row is a good place to have a shop selling suits purely because there are lots of others there already. The same applies to different technology or manufacturing businesses. Economists from Marshall to Michael Storper have emphasised the importance of local specialisation in generating competitive advantage, and during deindustrialisation many parts of the UK lost such specialisations. In recent years Enrico Moretti and others have emphasised the importance of the specialised tradable sector in an area in underpinning wider local productivity.

Although connectivity is a function of physical location, thriving places are likely to see more of both public and private investment in transport and other forms of connectivity: more direct flights provided by the market, more government investment in public transport and so on.

But there is a deeper level of explanation about which factors and interventions can kick off such positive dynamics in the first place. The work of economic historians like Tim Leunig explores how places have gained and lost their underlying economic rationales: over the last couple of centuries proximity to physical resources like coal or wool rose then declined in importance; different ports flourished and faded as shipping technology changed and Britain reoriented from global to imperial then to European trade; access to the motorway network became more important; the shift from manufacturing to services and “office jobs” favoured city centres: Joan Rosés and Nikolaus Wolf have found that over the last couple of decades capital cities in Europe have generally outperformed other places because of this.

The growth of higher education, the “knowledge economy” and international migration all shaped different places differently. In the US the growth of air conditioning saw more people moving to sunnier places, and people have also moved towards better weather in the UK, with older people (growing in numbers) gravitating to the coast. Fashions and social trends matter too: in the 1970s high income people were sent fleeing from inner cities by concerns about crime and social breakdown. In the 1990s and 2000s crime fell, and city living became more fashionable again.

Direct explanations	Self-reinforcing factors	Underlying explanations
Age of population, qualifications, health and quality of workforce	Sorting of people into high skill labour markets – urban agglomeration effects	Location characteristics: distance to other places, amenities, natural environment, weather
Business R&D investment	Sorting of firms into clusters of local sectoral specialisation	Access to primary materials
Capital investment	Connectivity	Significant anchor institutions: businesses, universities, scientific facilities
Land availability		Local culture and government

One difficult question this paper will grapple with is what it means for an area to underperform its potential. In one sense each place has limitless potential in the long term, but in the short and medium term our expectations about what counts as success or achievement of potential will be shaped by the resources that an area currently has, whether in terms of highly skilled people or particular industries.

All this needs to be kept in mind when we think about what counts as success or failure for a place. Largely rural areas, or seaside towns where many people have moved to retire will inevitably have different economic potential to a city centre full of working age people. But that doesn’t mean that we should write anywhere off, or that similar people don’t face very different opportunities if they live in different places.

What's the rationale for local growth policy?

There are multiple motivations for local growth policies, though they are often blurred together. Without endorsing any of them at this point, arguments for local growth policies include the following:

- 1) We should care about regional imbalances for simple reasons of equity. Having policies to help poor places as well as poor individuals is likely to be more effective than only having place-blind policies to help poor individuals. Like the old joke about the robber who is asked why he robs banks, who says, “that’s where the money is”, targeting areas with lots of poorer people might be an effective way to help poor people.
- 2) We should care about imbalances between areas for reasons of politics and because of their effects on political stability. Concentrations of deprivation could incubate dangerous forms of politics or social unrest (this was a big consideration in Europe back in the cold war era, and now much discussed again in respect of “populism”)
- 3) We may think that imbalances in economic outcomes lead to imbalances in opportunities: if there are few good jobs in a place it may be harder for young people to get on in life. Even if you are not concerned about unbalanced outcomes, you might be concerned about limited opportunities and might think this could lead to a loss of potential overall.
- 4) For conservatives and liberals, the sorts of things done through local growth policy (say, helping attract new jobs to a town with high unemployment) might be more attractive ways of spreading wealth than increased benefits and cash transfers which might have bad side effects or weaken incentives. You might think of local growth policies as pre-distribution, rather than redistribution.
- 5) In developed countries where the state plays a fairly large role, the decisions politicians make (explicitly or implicitly) have major effects on the distribution of economic activity. So, the distributions we see don’t reflect some naturally occurring or pure free market outcome anyway. Government policy can reinforce imbalances: for example, if the most growth enhancing government spending is skewed towards high performing areas (as discussed in a previous Onward report), or if the tax system changes in ways that change the balance between poorer and richer areas.
- 6) Other things equal, a more even distribution of economic activity may be likely to lead to stronger economic growth. In an unbalanced economy resources like land and infrastructure can be overloaded in some places, even while they are underused elsewhere. This might be particularly true where cities have seen population shrinkage, and have surplus infrastructure and land.
- 7) Because people (particularly lower skilled workers) don’t simply leave their homes in the face of local economic problems, having greater distances between unemployed workers and job opportunities could create matching problems. More balanced growth allows people who can’t afford to leave behind family networks to access more and better jobs. Having more higher-wage jobs in an area might improve people’s chances to progress. Conversely, concentrations of high unemployment might also lock in patterns of worklessness, changing local social norms in a negative way.

People who believe this argument might have different views as to whether matching gains might occur if there is a strongly growing area nearby – do you need to spur growth in struggling small towns themselves, or would they see gains from stronger growth in nearby cities?

- 8) Whether or not a more even pattern of economic activity leads to higher growth or to a more equitable income distribution, a more even pattern of growth may lead to higher levels of wellbeing. For example, instead of all being crowded into tiny flats in a couple of congested, polluted cities, people can spread out, live in bigger houses with gardens and so on. Some of these welfare gains could potentially be recognised in economic measures that account for costs (like income after housing costs), but some may not. In a more balanced economy people may have smaller incentives to move, so people are not forced to choose between a good job and their local and family networks.

Several of these arguments have been explored by economists, but it would be wrong to say that they have been definitively settled either way. And depending on which of these rationales are motivating policy, we might think that different kinds of policies are appropriate.

Arguments against local growth policies include arguments that:

- 1) Local growth policies fundamentally attempt to buck the market and often fail, draining resources and damaging overall economic performance. More transfers will further blunt economic signals with higher taxes to fund wasteful spending.
- 2) Policy should respond to market signals and be focussed on trying to reduce the obstacles to growth in high performing areas – be they planning constraints or regulatory barriers.
- 3) Attempting to spread the jam too thinly will end up undermining higher performing areas. There are non-linear benefits of having say a global financial centre or a small number of globally-renowned universities. Drain their resources and they risk falling below some kind of “stall speed” or critical mass, causing their benefits to be dramatically lost. Even people who tend to favour local growth policies might be split about how many places can realistically be helped.

Some of these arguments can have evidence brought to bear on them more easily than others, and we will be exploring them in Onward’s “Levelling Up” programme of research.

Some of the arguments are not necessarily in tension. Just because you want to level up poorer areas (in absolute terms), there is no reason not to also address barriers to growth in richer areas. It might be the case that some local growth policies have failed or even been counter-productive – but that does not necessarily mean that *all* such policies have been.

Whatever level of activity we see in different areas, and whatever trends we see in terms of areas catching up or falling behind, it is inevitably a matter of preference and judgement to jump from how the economy *is* to how we think it *ought* to be. How much imbalance is too much? Ultimately that’s a question of judgement.

To help form such judgements, people often seek to suggest a course of action by comparison between times and places. For example, it is often argued that the performance of different areas is becoming more divergent than it was.

It is also argued that that the UK is more geographically unbalanced than other similar economies.

In recent years it's often been argued that our large cities underperform the rest of the country in a way that is unusual internationally. This consideration certainly motivated policy under the Cameron government with policies aiming to improve inter city links, devolve power to metro mayors and support economies of agglomeration. In contrast more recently it's been argued that cities have forged ahead of left behind towns and shires.

Why does it matter if these arguments are true?

First, if we think the UK economy is diverging and unusually divergent compared to similar countries, we might think that levelling up is more important.

Second, they might shape what we do and where we invest.

The debate between the rival think tanks like “Centre for Cities” and the “Centre for Towns” reflects a difference of view about which places are most in need of additional help. If our cities are falling behind, we might focus more on trying to ignite agglomeration effects in secondary cities, and avoid jam-spreading efforts to smaller places which won't work.

In contrast, if it looks like the cores of our large cities are doing fine, while smaller towns and cities are struggling, we might want to focus *more* on either better connecting them to cities or on pushing investment directly towards those smaller places (two quite different choices). Its unlikely government will want to focus on just one of these to the exclusion of the others, but what we think is happening might determine the *balance* of effort and what *types* of things we do.

Questions this paper will examine include:

- 1) Is the economic performance of Britain's different regions converging or diverging? And how big are the gaps in performance?
- 2) How does the performance of different areas in Britain compare to similar areas in other developed countries? Are levels of income and output more unbalanced?
- 3) Are the cores of our cities now doing better than smaller towns and rural areas? And which parts of the UK are underperforming their potential?
- 4) Which parts of the UK are struggling most and most need levelling up? Which places are succeeding, particularly in less prosperous regions?
- 5) What is the relationship between the local economy and local people's wellbeing?

Reflecting on this, it then concludes with a discussion on how government should measure whether it is succeeding in “levelling up”.

Chapter One

Is the economic performance of Britain's different areas converging or diverging? And how big are the gaps in performance?



There are a range of different metrics we can use to look at which areas have strengthening or weakening economies.

And we can also look at different levels of granularity. Looking at smaller areas can show patterns which the average for larger regions conceals.

However, the smaller the units we look at, the more noisy the data becomes, and some types of data are only available for larger regions.

We will start by looking at large regions (the so called “NUTS 1”) level. We will look at:

- a) Population: changes, composition, and overall output.
- b) Employment and unemployment.
- c) *Per capita* measures of incomes, earnings and wealth.

We will then return to look at:

- d) Productivity, income and earnings for smaller areas - for which fewer types of data are available, but which allows for a more granular description.

Population: changes, composition, and gross value added

The NUTS 1 regions vary quite a lot in population size, from 9.1 million people in the South East and 8.9 million in London, to just 1.9 million in Northern Ireland and 2.7 million in the North East.

These regions have seen radically different rates of growth of their populations and economies.

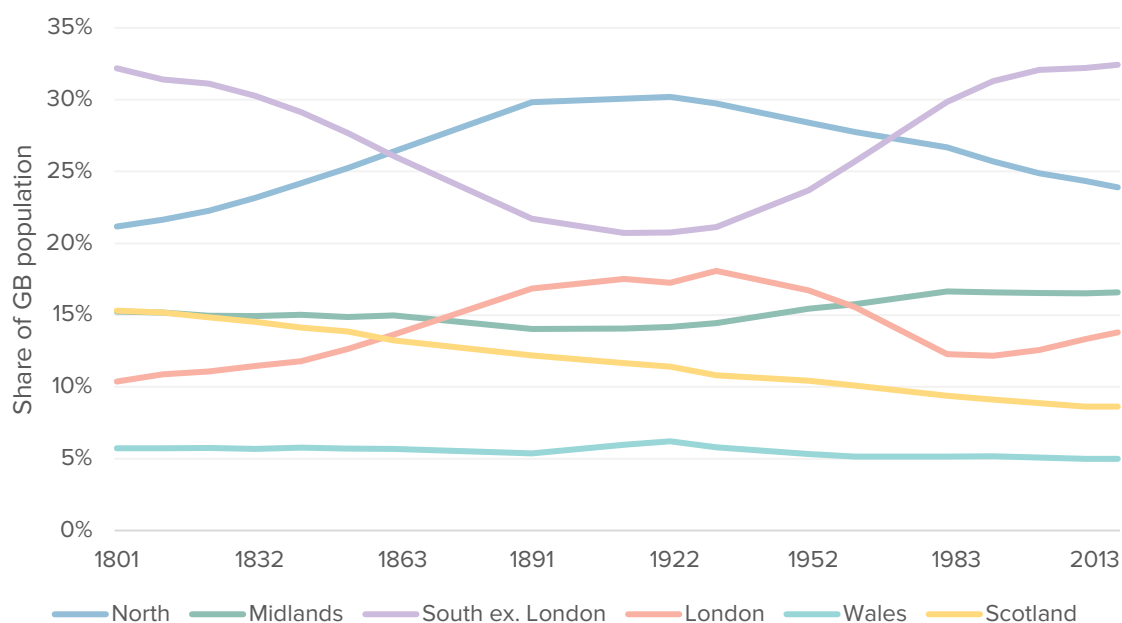
Population data has been collected for a long time, allowing us to look at the very long term. The data shows that the north of England and London saw faster population growth than the rest of the country in the nineteenth century, as Britain urbanised during the industrial revolution.

Conversely, in the post-war years, both saw slower growth, while the rest of the south of England saw faster population growth. London’s population declined in absolute terms.

However, from the mid-1980s the north and London parted ways – the north continued to shrink relatively, while London started to see faster than average growth. In 2015 the capital finally surpassed its previous peak population of 1939.

Scotland has consistently seen slower than average population growth over 200 years. The Midlands and Wales grew around the national average rate – with the Midlands a little faster in the post war years.

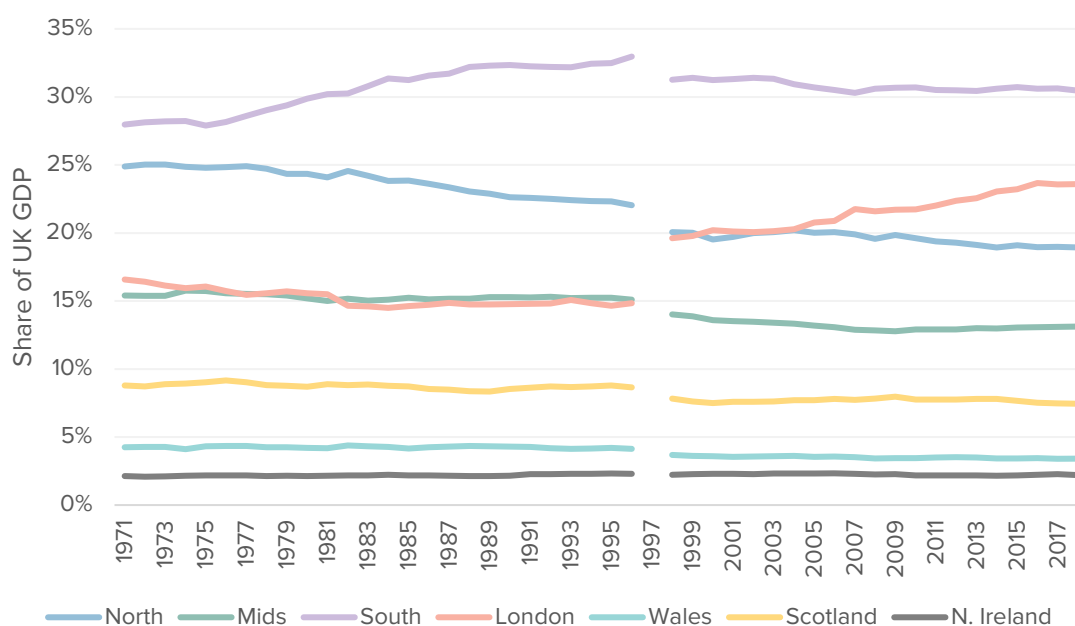
Figure 1: Regional share of GB population, 1801-2018



Source: GB Historical GIS / University of Portsmouth, Vision of Britain

ONS data on regional GDP doesn't go back as far as population data. There's also a major break in the data in the mid-1990s caused by changes to a new accounting framework, and also the change from the old "standard statistical regions" to the "government office regions" (a.k.a. NUTS 1 regions). This particularly affected the measured size of greater London. But what it shows is consistent with the population data.

Figure 2: Regional share of UK GDP, 1971-2018



Source: ONS, Historical estimates of Regional GDP

The South East grew its share from the early 70s to the late 1980s. The share of the north of England declined from 1973 to 1996 and then again from 1998 until 2014. The midlands held its share from 1971 to 1996 but lost share from 1998 to 2009. London lost ground from 1971 to 1984, and regained only part of it by 1996. But from 1998 to 2016 London's share soared.

London's economy is not far off being twice as large as the Midlands.

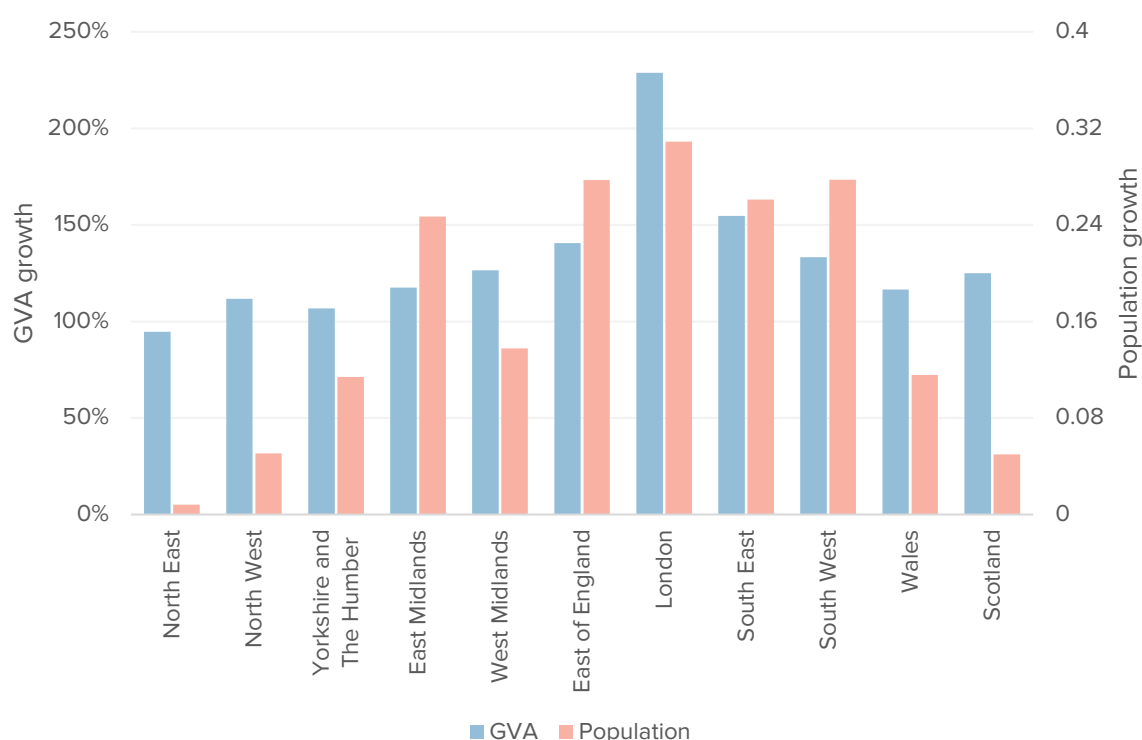
Having been the same size as the economy of the north as recently as 2004, London's GDP is now a quarter bigger. London is now the size of the North plus Edinburgh, Swansea, Belfast, Bristol and Birmingham. It has effectively added an economy the size of all those regional capitals to itself through faster growth.

The Economic Statistics Centre of Excellence has released a longer run of regional GDP data, which aims to deal with the break in the time series, and allows a rough comparison for individual regions over a longer period. ONS also publish like-for-like population data back to 1981. This means we can compare population and GDP growth.

London's population was 31% bigger in 2018 than it was in 1981. In contrast, the North East's population was just 1% bigger, while the North West and Scotland grew just 5%.

The North East's Gross Value Added (GVA) nearly doubled over the same period, but London's GVA more than tripled. So overall GVA growth partly reflected big differences in population growth, but also dramatic differences in the growth of output per capita.

Figure 3: GVA and population growth, 1981-2018



Source: Economic Statistics Centre of Excellence, Regional Output Growth and ONS, Population Statistics

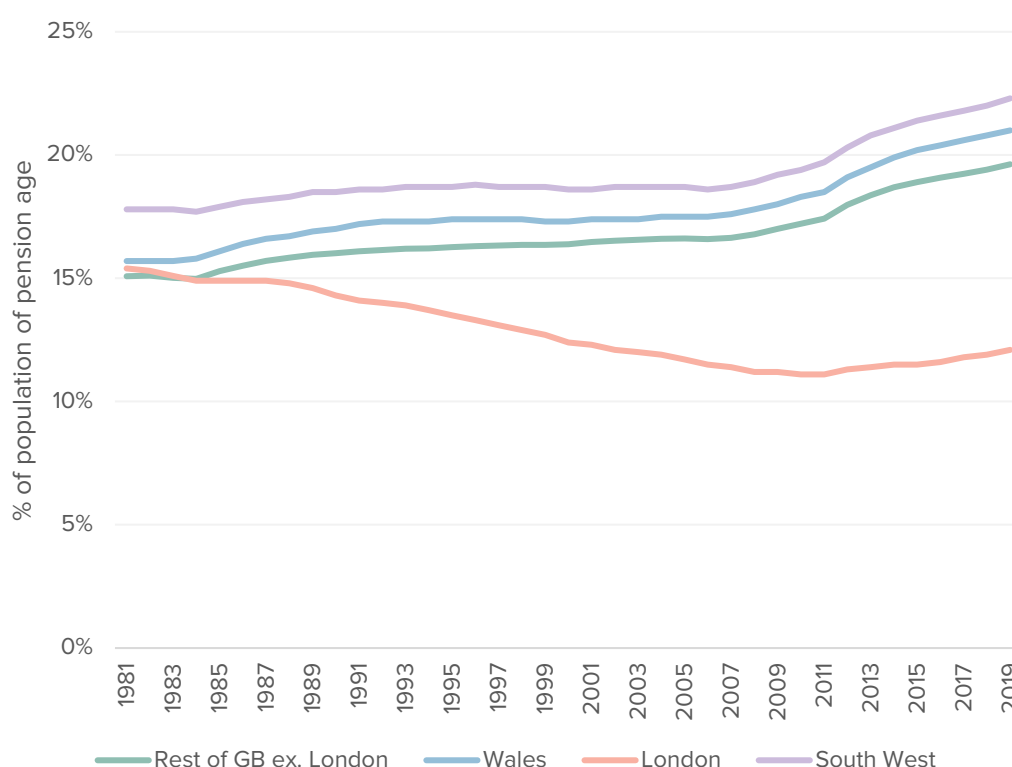
So, even before we look at other measures of economic strength or income per person, it's worth noting that an area with a fast-growing population and economy will feel very different to one with a flat population. And in general, it has been areas which are richer per head that have seen faster growth in population. There is a divergence which per head measures alone do not capture.

Putting together output and population growth, we will see later that there has also been a large divergence between output and incomes per person between London and the rest of the country since the mid-1990s.

Looking in more detail at changes in the population, we can see that this is partly because London has dramatically diverged in terms of its age and earnings profile.

In most of the country the proportion of people over pension age has been steadily rising, particularly since the late noughties as the baby boomers started to retire. In London the proportion of pensioners decreased for most of the period since 1981. Of the other regions Northern Ireland has relatively few pensioners, while Wales and the South West have the highest proportions.

Figure 4: Share of population of pension age

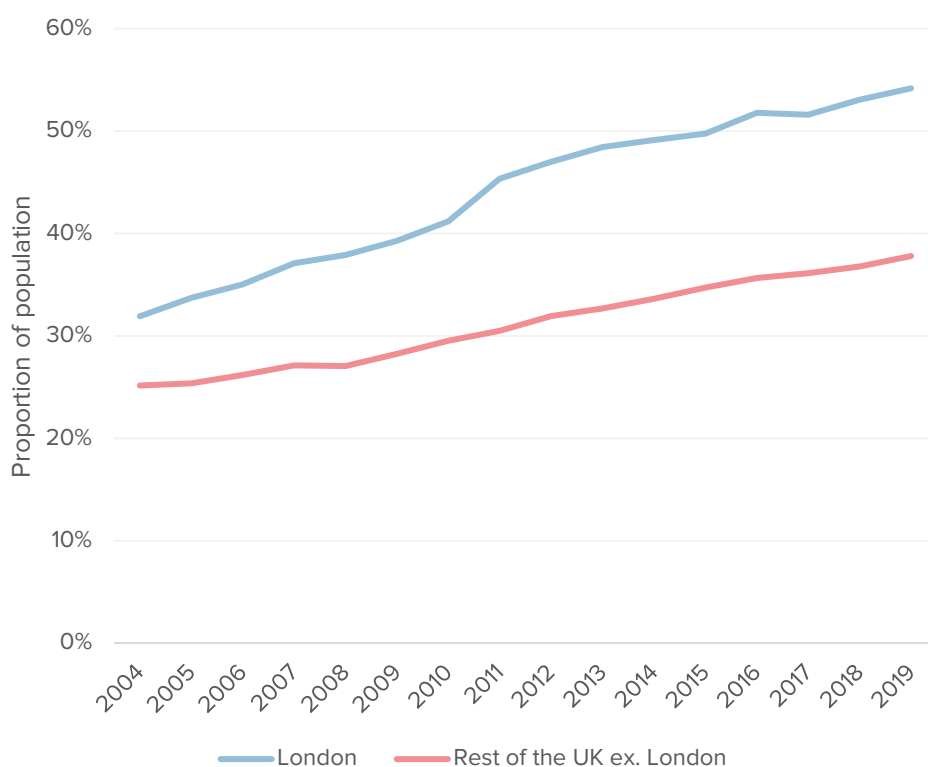


Source: ONS, Population Estimates

London's population has also diverged from the rest of the county in terms of qualification levels. If we look at the proportion with degree level (NVQ4+) qualifications, the share in all regions has increased. But the absolute difference between London and other regions has increased. If we look at the proportion with degree level qualifications as a proportion of the

national average, we see that London pulled further ahead between 2004 and 2011. Although it lost a little ground between 2012 and 2018, over the whole period London went from having a quarter (27%) more graduates in 2004 to a third more than the rest of the UK (43%) in 2019.

Figure 5: Proportion of working age people with degree level qualifications



Source: ONS, Annual Population Survey

At the sub-regional level, the differences are even more pronounced: in North East Lincolnshire, Doncaster, Sandwell, Dudley, Wolverhampton and Blaenau Gwent, less than a quarter of people of working age had a degree in 2019. In Wandsworth, Hammersmith and Fulham it was over 70%.

The proportion of local residents with a degree is the result of a number of factors: the achievement of local pupils at school; the presence or not of local universities; the ability to attract students; and (above all) opportunities for high skill employment.

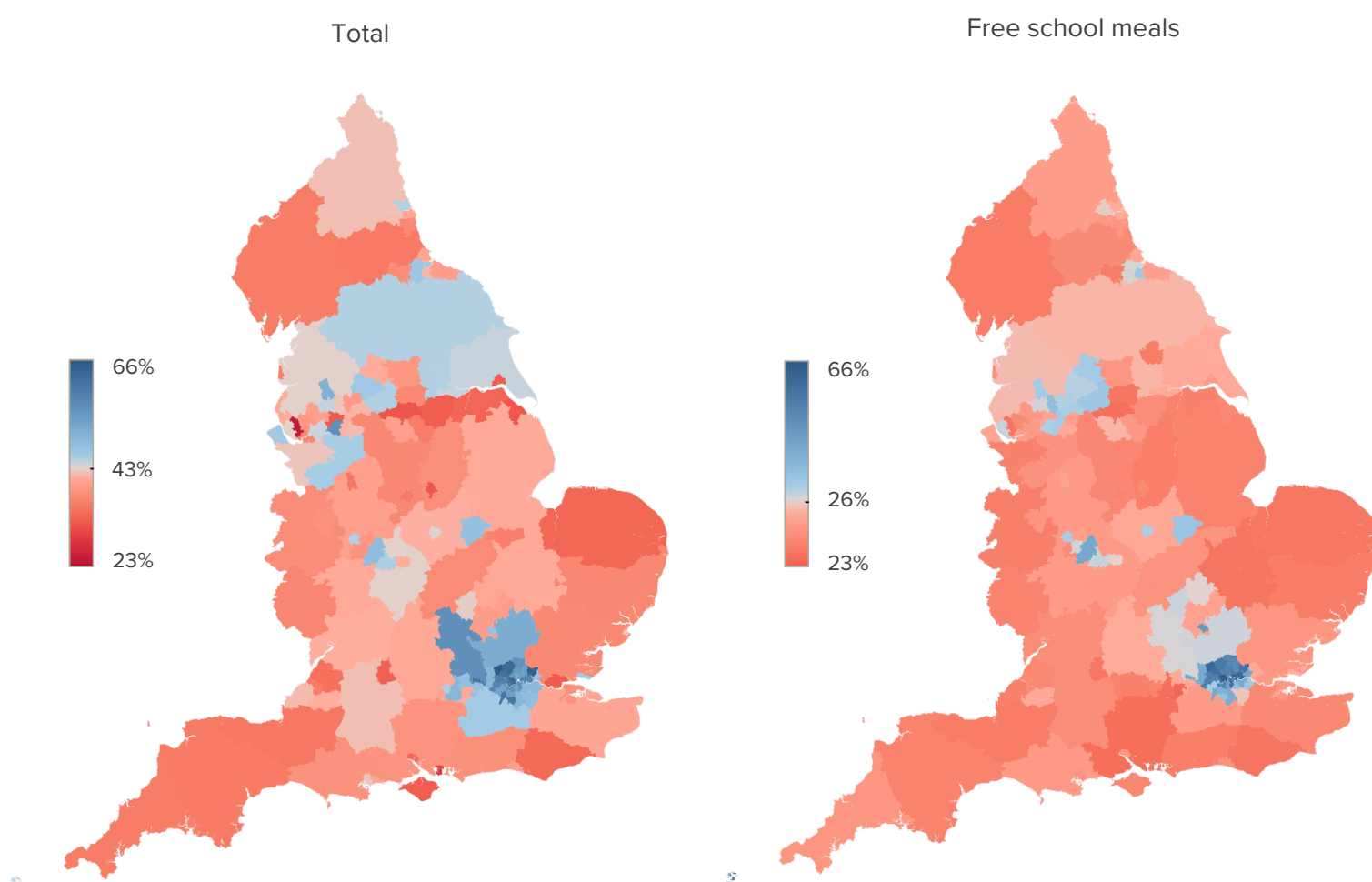
As work by the Centre for Cities has shown, there are marked flows of high skilled people in different directions at different points in their life course: towards urban areas for university, towards London post-graduation, and into commuter hinterlands at the point where people settle down and have children. Levelling up policy could seek to influence this at any point: achievement in schools in a particular place, or the ability to attract students, or to attract and retain graduates.

In recent years the proportion of pupils going to university has been much higher in London than the rest of the country, with other urban areas like the West Midlands, Greater Manchester, West Yorkshire and Leicester also doing well. The proportion progressing to higher education has grown much faster in these areas. This may to some extent reflect the growing proportion of parents in these cities who are graduates, but may also reflect other factors: if we look at progression rates just for children eligible for free school meals (who may have more similar parental qualifications) the pattern is the same, with FSM pupils in London more likely to go than the average pupil elsewhere.

In Greater London over 45% of pupils eligible for free school meals progressed to higher education in 2018/19. Outside London there are 80 local authorities where pupils *not* on free school meals are less likely than this to go to university. Overall, more than 60% go to university in places like Sutton, Hammersmith and Fulham, Slough, Kingston upon Thames, Brent, Kensington and Chelsea, Barnet, Westminster, Redbridge and Harrow. But less than a third go in Knowsley, Portsmouth, Barnsley, North East Lincolnshire, Nottingham, Salford, Hull, Thurrock, Doncaster, the Isle of Wight and Swindon.

Figure 6: Progression to higher education by local authority, 2018/19

Source: DFE, progression to higher education

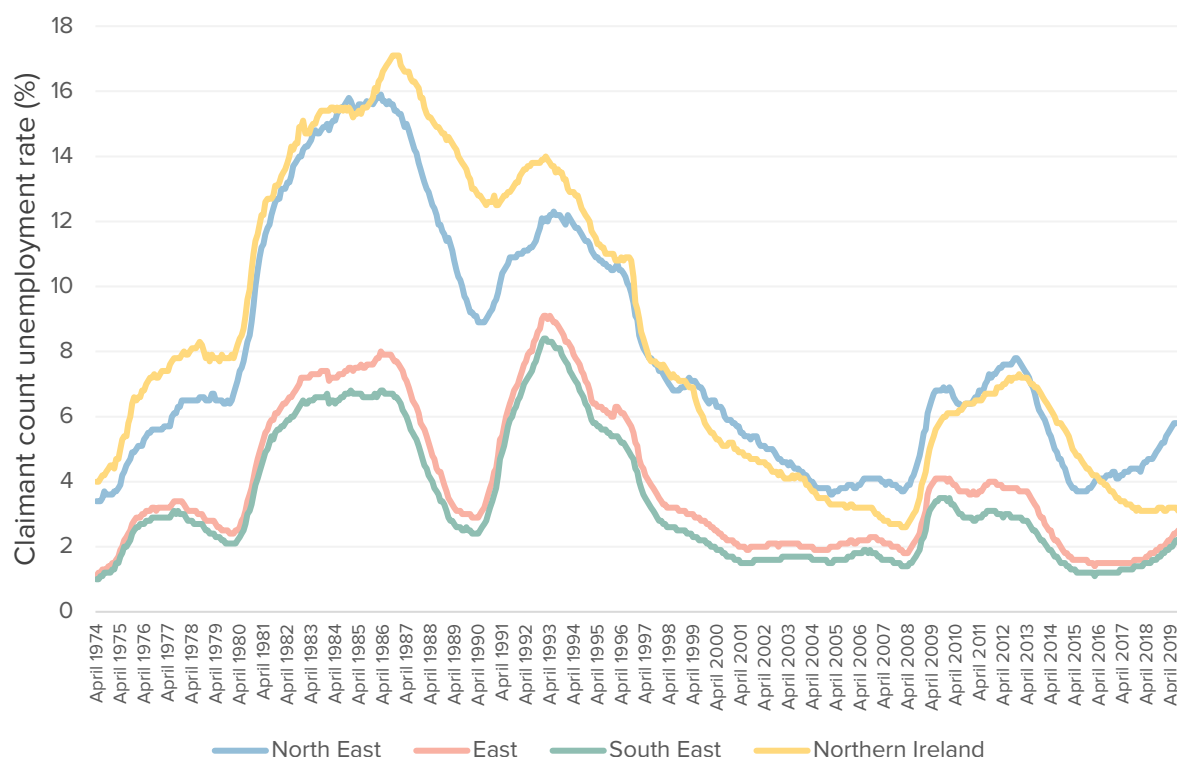


Employment and unemployment

Data for the claimant count unemployment rate is available for NUTS 1 regions back to the 1970s and we can see that in *absolute* terms the very large absolute differences in claimant count rates seen in the early 1980s had been reduced by the middle of the 2010s (at which point the data stops being so consistent because of the rollout of Universal Credit). For simplicity, the chart below shows just the two highest and two lowest unemployment regions.

It could be argued that *proportional* differences in unemployment rates have not diminished, but unlike some other measures, for *unemployment*, using the absolute differences feels more intuitive. The differences between areas with 1% or 2% unemployment are not great. Differences between 8% and 16% unemployment (as in the early 1980s) feel dramatic. This feels like a clear instance of convergence over time, simply because unemployment (at least pre-coronavirus) was so much lower.

Figure 7: Unemployment rate 1974-2019, claimant count



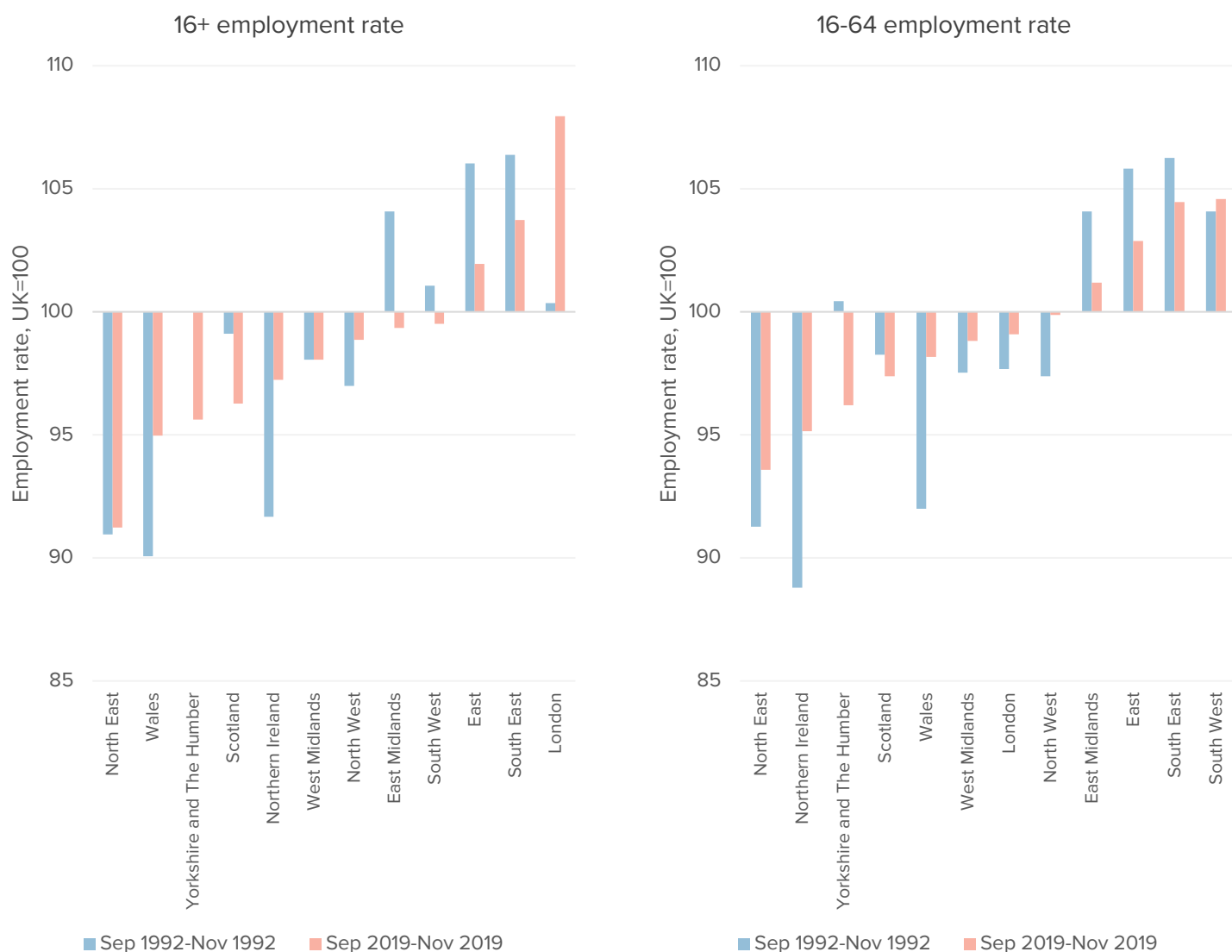
Source: ONS: Claimant Count

Convergence is less clear if we look at employment rates, and a lot turns on what measure we use.

To make the trends clearer and to look through the ups and downs of the economic cycle we can look at regional employment rates compared to the national average.

If we look at the employment rate for *16-64 year-olds* then we seem to see convergence. In contrast, if we look at the employment rate for *everyone over 16*, we do not, as the 16+ employment rate in London has grown much more quickly than the rest of the country.

Figure 8: Regional employment rates compared to the national average



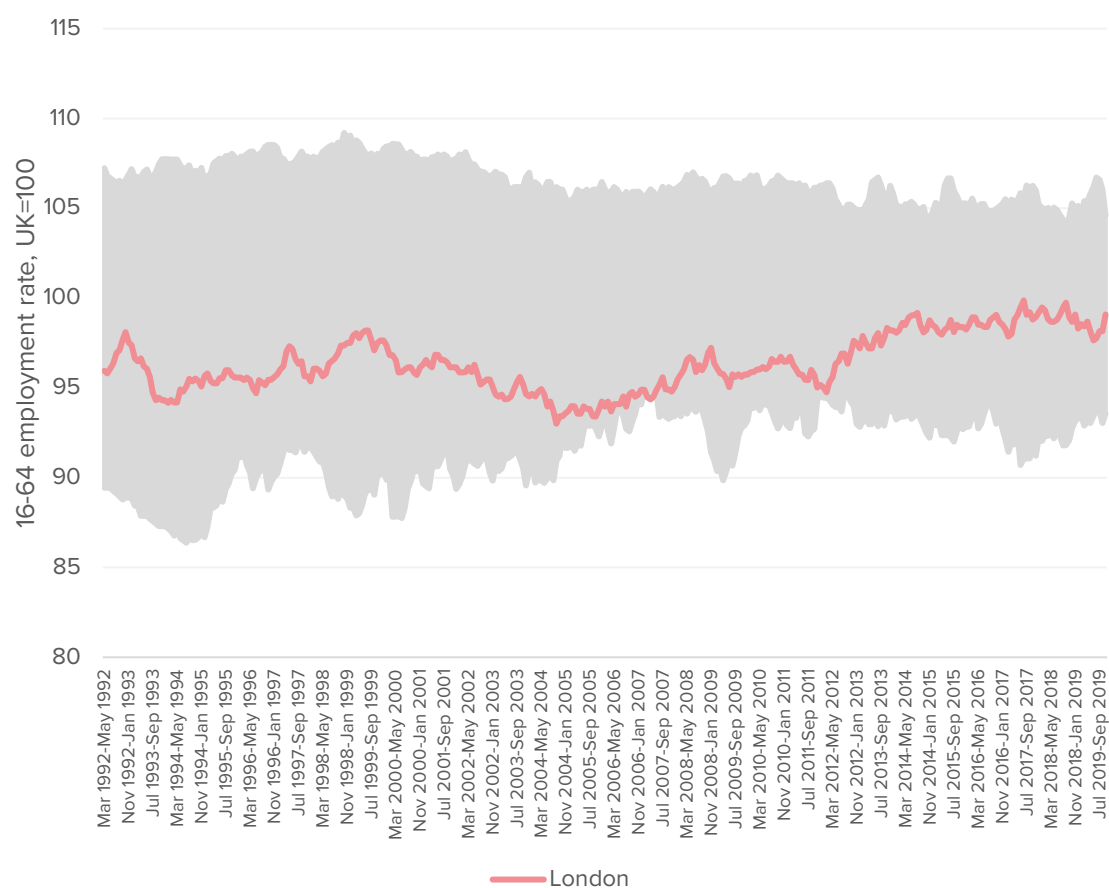
Source: ONS: Regional Labour Market Statistics

The difference between these two rates is partly because a greater proportion of those over age 16 in London are pre-pension age. But it also reflects a higher employment rate among those aged 65 or over in London.

In fact, London combines the *highest* employment rate for the over 65s with the *lowest* employment rate for those aged 16-24. London's employment rate among pension age people is above the national average and has been increasing faster.

Looking at the 16-64 rate for particular regions, Wales and Northern Ireland caught up strongly, and London and the North West also caught up substantially. The East Midlands, East and South east converged down towards the national average. Yorkshire fell behind the national average, while the South West stayed above it.

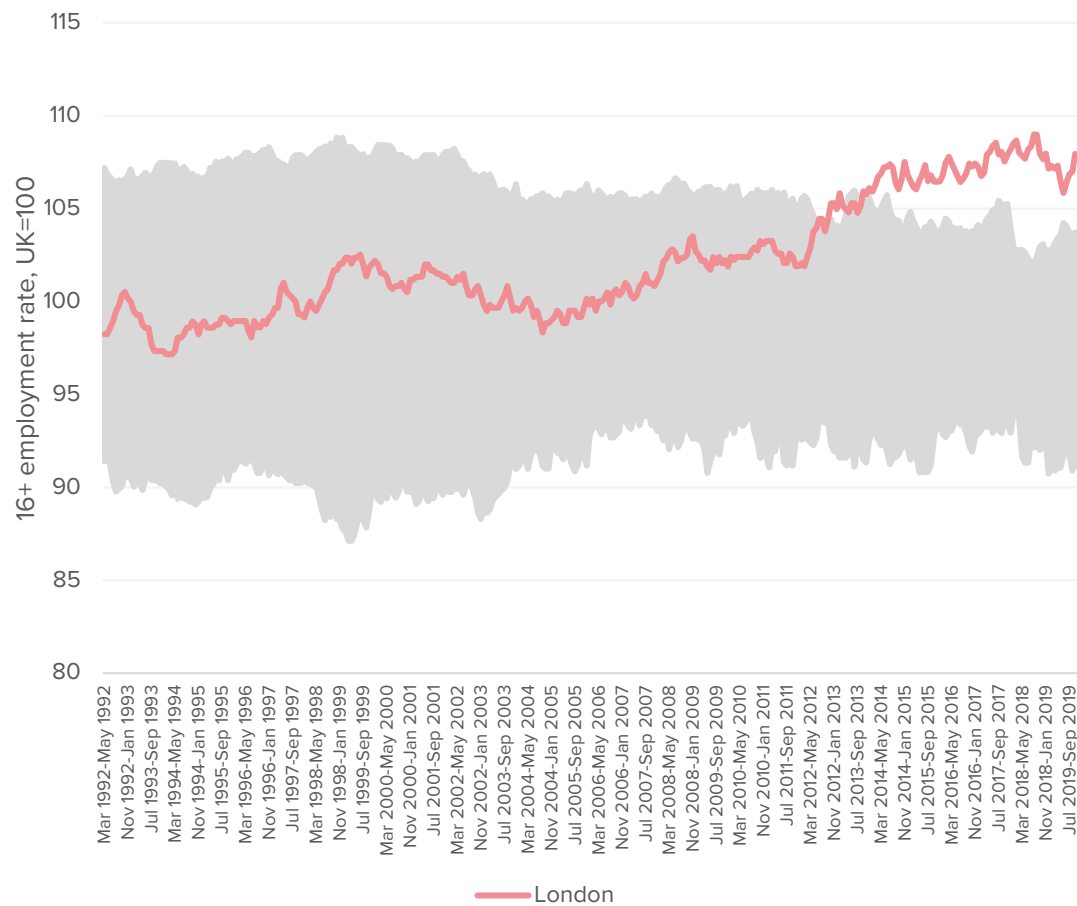
Figure 9: Employment rate, 16-64, relative to UK average



Source: ONS: Regional Labour Market Statistics

In contrast, if we look at the employment rate for all age 16 and over, then we see London pull dramatically ahead. So much so, in fact that while Wales and Northern Ireland still caught up, the North East didn't, and Scotland fell back.

Figure 10: Employment rate, 16+, relative to UK average



Source: ONS: Regional Labour Market Statistics

Incomes and earnings

In general, most developed countries seemed to see divergence in levels of income and output per head between the 1960s/80s and today.

Rosés and Wolf (2019) produced regional income estimates for 16 European countries and concluded that disparities in per capita income declined in the post war years, before hitting an inflection point in the 1980s, and increasing over the last two decades.

Looking at particular countries' experiences suggests the same pattern, whether it's the US (Ganong and Shoag, 2017; Klein, 2019), or the UK (Geary and Stark, 2016), or Sweden (Enflo and Rosés, 2015), or Spain (Martínez-Galarraga, Rosés and Tirado, 2015) or France (Rosés and Sanchis, 2019).

However, this pattern of divergence looks very different depending on what measure of income or output we use as a measure.

For ease of comparison, in this section we look at index values. In each case the level each region is at is compared to the UK average, which is set at 100. Figures over 100 indicate a stronger performance than the national average.

We start with a series of national accounts type measures from the ONS. These are produced in roughly the same way GDP data is produced.

We are not going to look at the commonly used measure of **GDP per capita** at this point. Where there is a large amount of commuting into a region, dividing the GDP produced in a workplace by the number of residents who live there (different numerator and denominators) starts to lose its meaning.

Take London for example. There are a quarter more full-time workers who work there than who live there. So on the one hand some of the GDP is being produced by people who live elsewhere, who take their income home with them. On the other, there are people who live in London who are not economically active and may not benefit from a growing local GDP. For example, GDP per head for the City of London is just under £400,000: but this is a meaningless statistic, as we are dividing huge production (with the work done by commuters) by a tiny number of residents.

We will return to the share of GDP compared to the share of income when we look at what is happening inside cities, because it's important where income is being earned as well as where it is consumed. But, for now, we will look at different measures which aren't flawed by commuter flows:

Gross disposable household income (GDHI) is the amount of money that all of the individuals in the household sector have available for spending or saving after they have paid direct and indirect taxes and received any direct benefits. As the ONS notes, "GDHI is a concept that is seen to reflect the "material welfare" of the household sector." Unlike GDP per capita it

solves the commuting problem as both the numerator and denominator are on the basis of where people live.

The ONS also produce different stages of GDHI. The chart below shows what GDHI looks like before the effect of the taxes that households pay and the benefits they received. This is **GDHI primary income**. As the chart below shows, before the redistributive effects of tax and benefits, the differences between these large regions are greater, with London further ahead and other regions further behind. Looking deeper into the data, the net effect of taxes and benefits tends to be to move money to areas that are poorer – but also from younger areas like London to areas with more older people. This reflecting the swing over the life cycle from typically paying into the welfare state among working age people to receiving benefits as pensioners. The difference between these two measures of GDHI tells us something about the geographical redistribution caused by government which we will return to below.

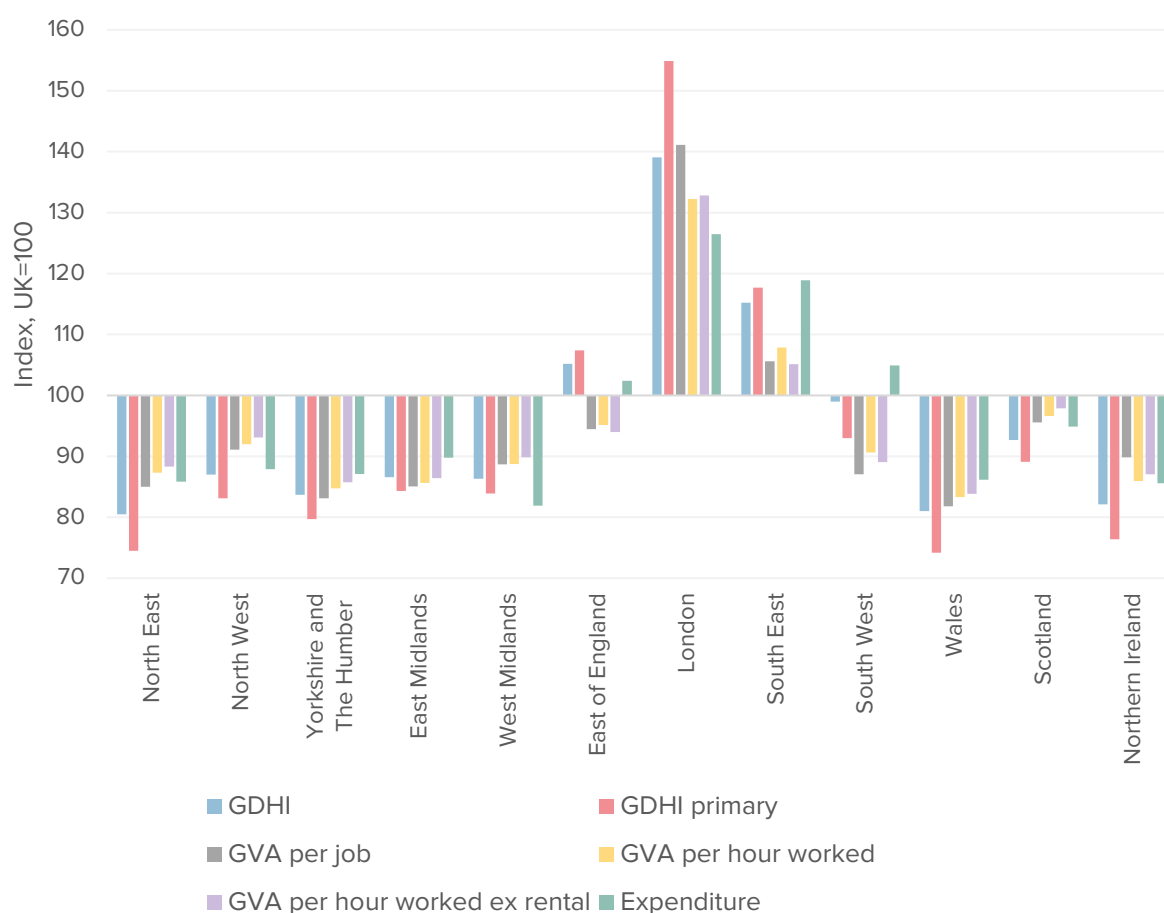
ONS also produce an experimental measure of **expenditure by region**. This differs from GDHI, because savings rates are different in different regions. London has a particularly high savings rate which may reflect in part a younger population but also higher incomes (richer people save more of their income). The West Midlands also has a relatively high savings rate.

We can also look at **productivity per worker** or **productivity per hour**. While GDHI is a measure based on the income of people who *live* in a particular place, the next three measures are measures of the productivity of people who *work* in a particular place. They may or may not live somewhere else and commute in from another areas. Differences in productivity can be measured per hour or per worker. ONS also looks at productivity per hour excluding the income people gain from renting out property. In the case of these large regions it doesn't make much difference, but for some smaller areas the difference can be significant.

Broadly speaking, differences in productivity between regions are similar to differences in incomes, although the gaps are somewhat smaller. London is a little less far ahead of the national average, particularly on the hourly measures of productivity, while the North East, North West and Northern Ireland are a little less far behind.

While London's GDHI before tax and benefits was 55% above the national average in 2018, the North East and Wales were around 25% below. Productivity in London (minus rental income) was 32% above the national average while Wales was 16% below.

Figure 11: Income, productivity and spending by region, 2018



Source: ONS, Gross Domestic Household Income, Regional and Sub-regional Productivity and Regional household final consumption expenditure, NUTS1 countries and regions

Changes over time

We now look at changes over time. We are limited here in how far we can go back. GVA per hour statistics go back to 2004, GVA per job back to 2002, and GDHI back to 1997. Expenditure data is only available back to 2009 at present.

The chart below shows the change in relative performance for each region on different measures between 2004 and 2018.

Looking at GDHI for example, London went from being 29% to 39% above the UK average. The chart below shows this as a 10% change relative to the national average.

On the GDHI measure, London pulled ahead so strongly, all other regions fell back from the national average. Yorkshire and Wales particularly fell back.

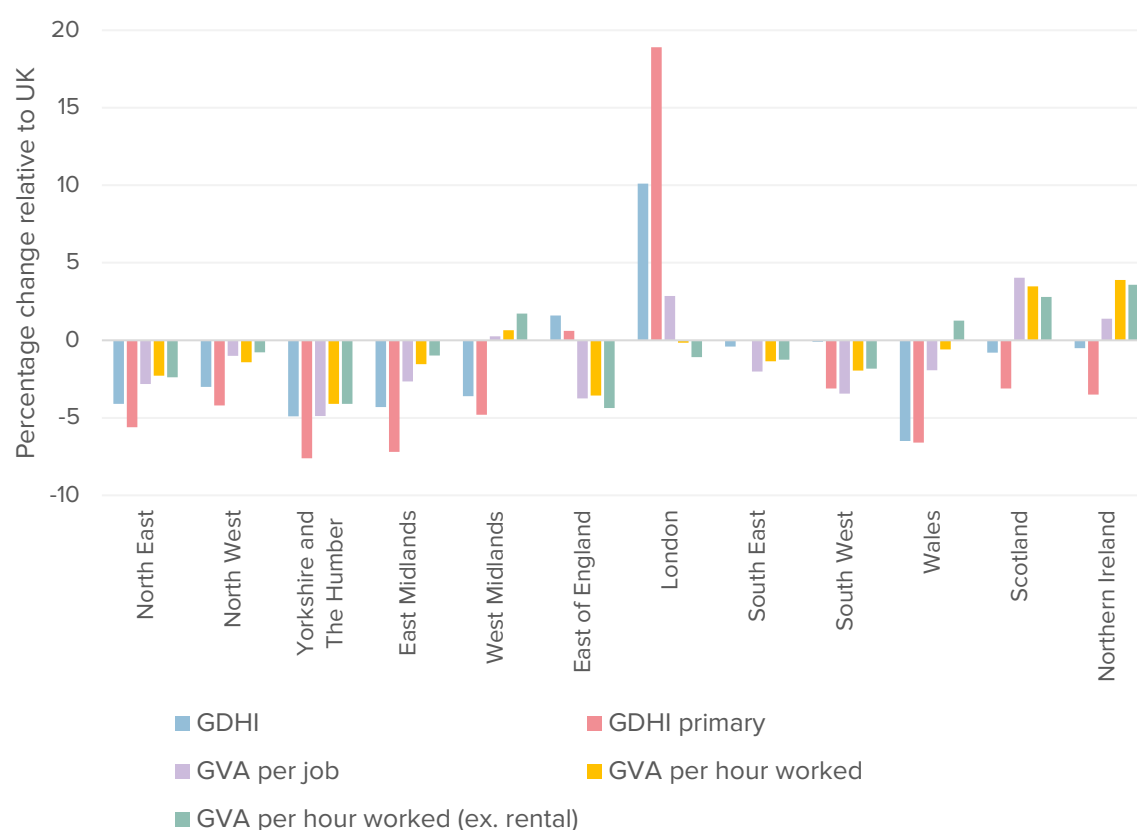
If we look at GDHI before tax and benefit transfers the divergence is even more pronounced, with London moving from over 35% to nearly 55% ahead of the national average since 2004. This shows that the tax benefit system is constraining growing divergences in regional

income. If we look back further to 1997 and compare London to the rest of the UK, London's pre-tax and benefit income (GDHI primary income) has gone from just under 30% ahead of the rest of the UK to nearly 70% ahead (69.4%)

Two out of the three measures of productivity show divergence, but on a much smaller scale. Per filled job London forged further ahead, while all regions except Scotland fell back relatively. However, the divergence was smaller than for GDHI. These changes are highly sensitive to the starting point – London's productivity per worker was pulling ahead strongly in 2002-2004.

On a per-hour basis divergence was smaller again, with London flat and Scotland and Northern Ireland catching up. And per hour, *excluding rental income* there is a mixed picture. There was some convergence in that the two regions above the national average (London and the South East) fell back a bit, while Scotland, Wales and Northern Ireland caught up. But the north east, north west, Yorkshire and the south west all diverged and fell further back.

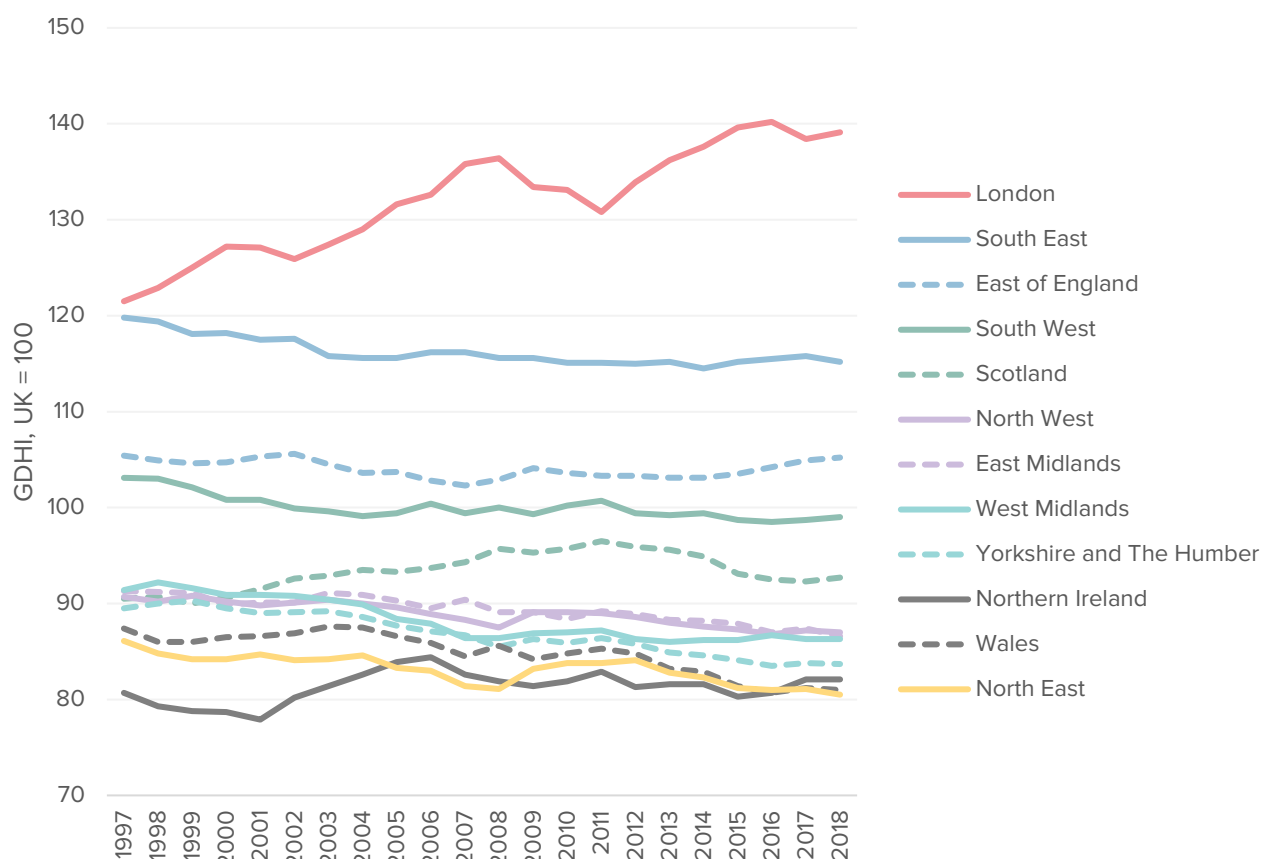
Figure 12: Change in income and productivity, 2004-2018



Source: ONS, Gross Domestic Household Income, Regional and Sub-regional Productivity

If we home in on one of these measures – GDHI, we can see that the extent of divergence or convergence varies quite a lot over the economic cycle. London has been on a steady divergence path except for the early 2000s downturn and the period immediately after the recession when the divergence reversed for a few years. Scotland, which had seemed to be converging, also fell back relatively after the recession.

Figure 13: GDHI by region, relative to UK, 1997-2018



Source: ONS, Gross Domestic Household Income

But all the measures we have looked at so far have been averages which tell us nothing about the *distribution* of income. They are simply dividing an accounting measure (income, production) by the number of people living there. But in the real world not everyone gets an equal share. So we now turn to a different set of measures based on large scale survey data for the same large regions.

Households Below Average Income (HBAI) lets us look at mean and median incomes, both before and after housing costs. Average incomes on these measures include the benefits people received. Data is equalised, to allow comparison across different household types.

The Annual Survey of Hours and Earnings (ASHE) is based on tax data, so has a much larger sample size, and lets us look in much greater detail at the income distribution and at smaller areas like parliamentary constituencies or lower tier local authorities. But it doesn't let us look at benefit income or pensions or housing costs.

Data for HBAI is available on a consistent basis back to financial year 1994/5 for Great Britain and 2002/3 for Northern Ireland.

HBAI lets us look at two things. First, it lets us look at the effect of housing costs – in fact it is one of few measures which takes into account variations in people’s living costs. Second, it lets us look across the income distribution. From it we can see two things.

First, differences between regions are unsurprisingly smaller if we look at measures after housing costs. The wealthiest regions tend to have higher housing costs, while poorer areas have lower costs.

14/15 – 16/17 (UK=100)	Median Before Housing Costs	Median After Housing Costs	Difference in high-low gap from housing	Mean Before Housing Costs	Mean After Housing Costs	Difference in high-low gap from housing
Highest region	111.9	110.1		119.1	120.3	
Lowest region	87.7	90.4		81	84.9	
Gap	24.2	19.7	-4.5	38.1	35.4	-2.7

Source: Households Below Average Income

The data shows that if we look at *mean* rather than *median* incomes, the differences are much greater. The trends are also different.

If we look at HBAI *median* incomes by region, there seems to have been some limited *convergence*.

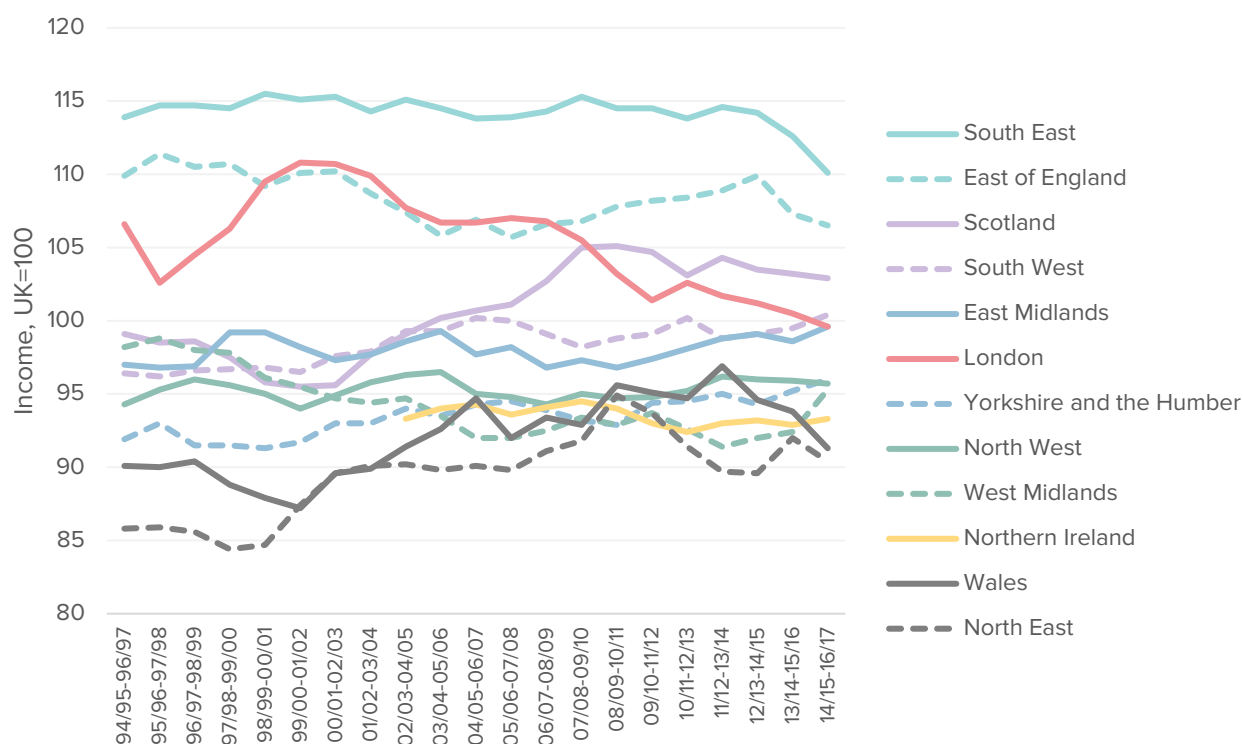
However, if we look at *mean* incomes by region, there is some limited *divergence*.

With HBAI we can also look either at the whole population or at working age households only. But the pattern is similar whichever we choose. The measure on which there is the most evidence of convergence is median incomes, after housing costs, for working age households.

We can see that 10 out of 12 regions have converged towards the national average over the period for which we have data, with seven poorer regions catching up and all of the three richer than average regions falling back. There is no dramatic turning point during which we saw convergence across the board. London converged down during the recession, and the south east more recently. The North East saw particular catch up during the early noughties, and Scotland for most of the noughties.

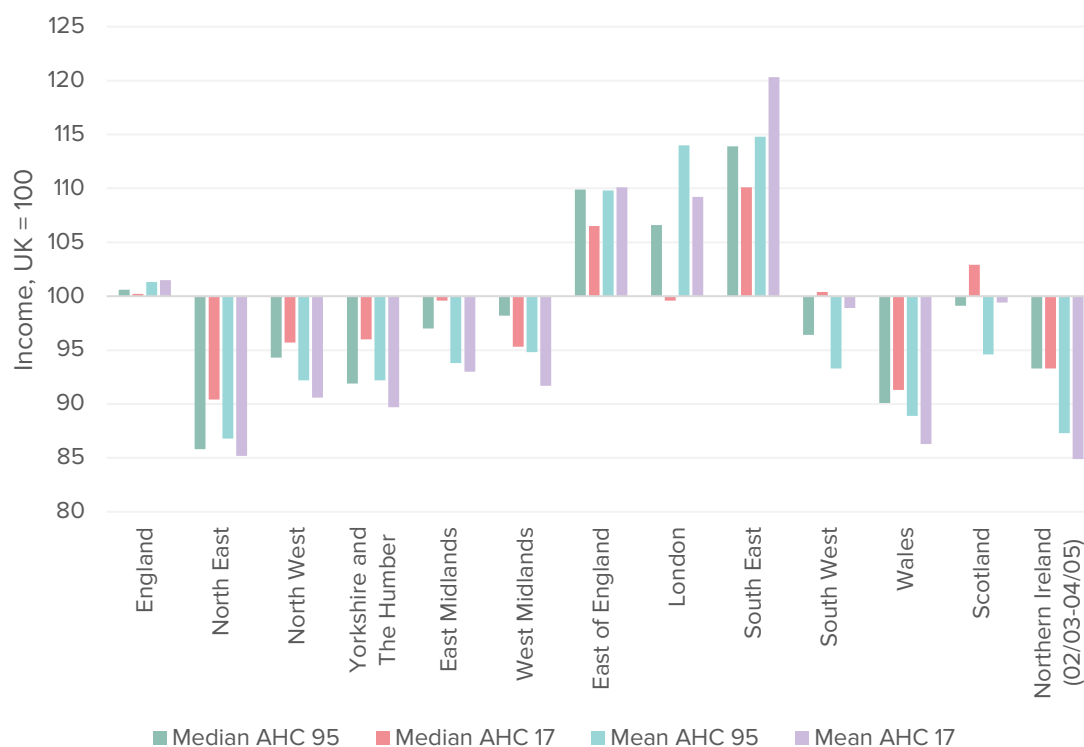
However, if we look at *mean* incomes for the same measure, rather than median, 9 out of 12 regions have *diverged*. Only Scotland and the South West saw upward convergence, while only London converged down.

Figure 14: Median incomes after housing costs, working age



Source: Households Below Average Income, working age

Figure 15: Median and mean incomes after housing costs



Source: Households Below Average Income, working age

This suggests that what is driving divergence of mean incomes is changes to the income of richer households, which influences the mean, but not the median.

To get at this, we can use ASHE to look in more detail at the distribution of *earnings* in each region, although it does not include benefit income.

ASHE data shows that the richer regions are more unequal, with the relative differences between regions larger for the highest earners in each region than for the poorest.

The proportional differences in annual earnings for full time workers at the 10th percentile in each region are much smaller than the differences for those at the 90th percentile.

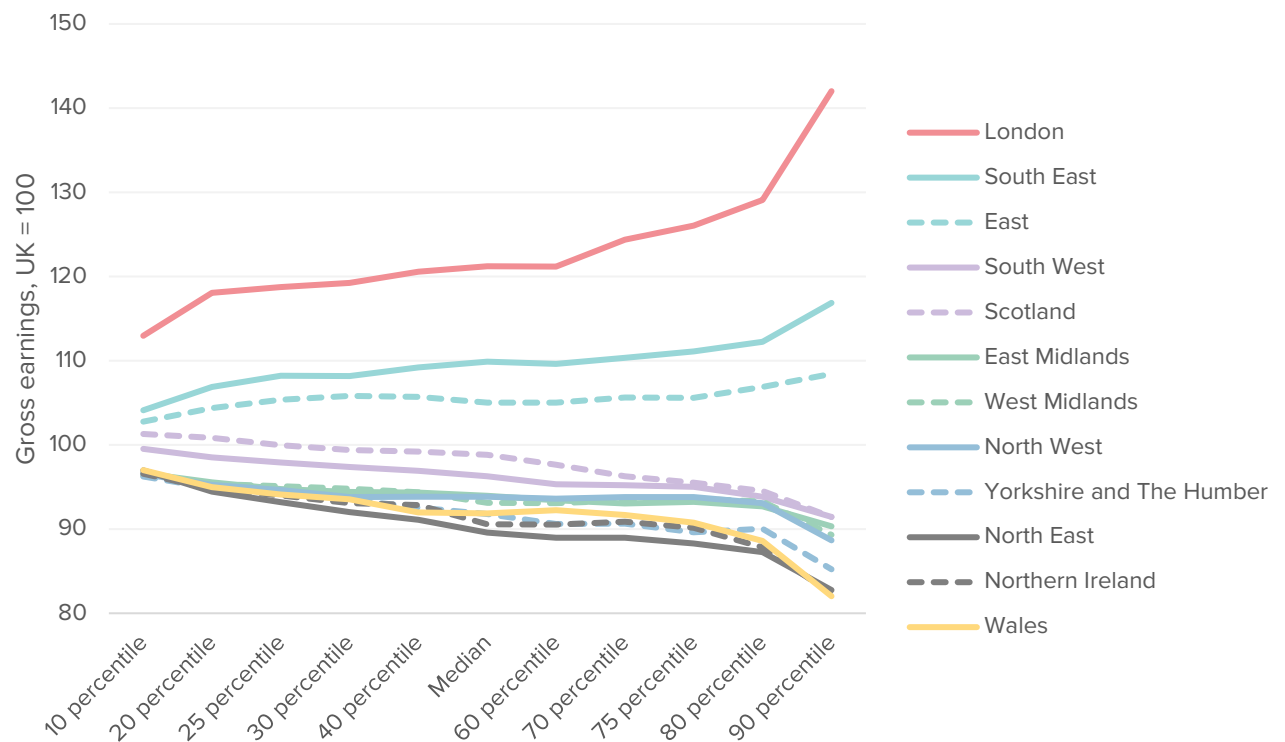
- If we look at data based on where people *live*: People at the 10th percentile living in London earned 13% more than those at the 10th percentile nationally, compared to Yorkshire where they earned 4% less (£19,400 compared to £16,500). But those at the 90th percentile living in London earned 42% more than the national average, while those in Wales and Northern Ireland earned 8% less. (£86,500 compared to £50,000).
- If we look at data based on where people *work*: People at the 10th percentile working in London earned 16% more than those at the 10th percentile nationally, compared to Yorkshire and the East Midlands where they earned 4% less (£20,000 compared to £16,500). But those at the 90th percentile working in London earned 54% more than the national average, while those in Wales earned 10% less. (£94,000 compared to £48,000).

These are gross earnings. One obvious factor which may reduce regional disparities in earnings for lower earners is the minimum wage. Over time, particularly since the introduction of the National Living Wage, this has come to determine the pay of a larger number of workers across the country, with the proportion of workers who are paid the minimum wage higher in poorer regions. In 2018 around 4% of workers in London were on the National Living Wage compared to 9.5% in Northern Ireland.

If we were looking at total incomes as with HBAI, it may also be that the growth of in work benefits (Tax Credits, UC) are also having a similar effect of compressing regional income differences for lower income households.

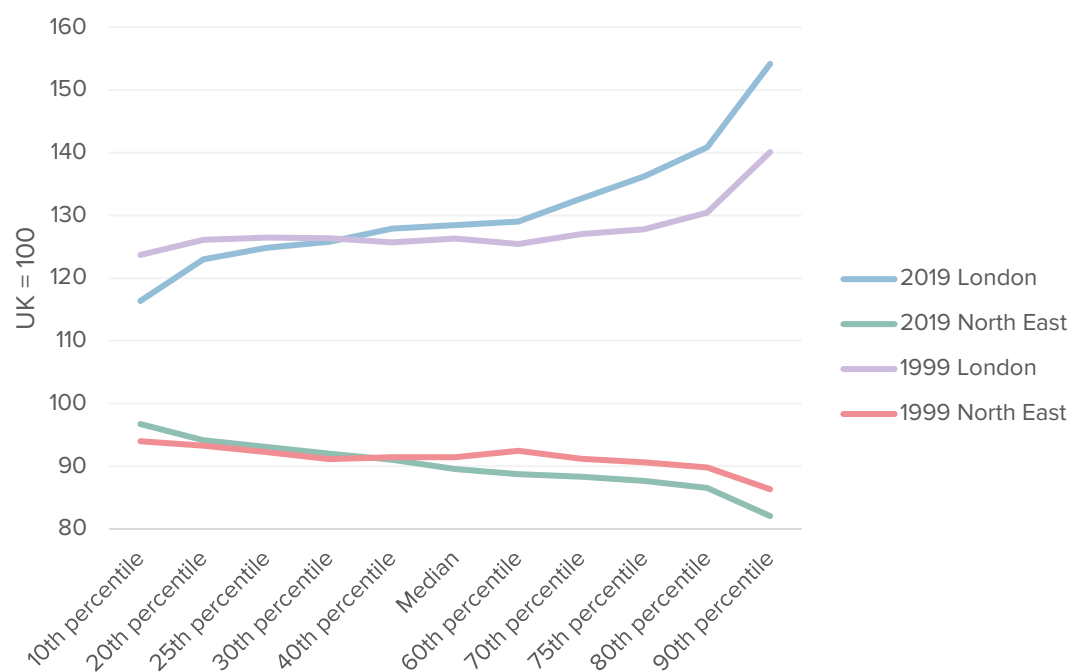
If we look at how regional earnings have converged or diverged over time, we can see that gaps have got smaller for lower paid people but bigger for higher paid people. For example, people who work in poorer regions like the North East, Wales and Northern Ireland, people below the 30th percentile converged up towards the national average (particularly in Northern Ireland), while Londoners converged down. But for those above the 40th percentile, Londoners pulled further ahead, while people above the median in Wales and the North East fell further behind.

Figure 16: Gross earnings compared to national average at different percentiles by residence, full-time workers, 2019



Source: ONS, Annual Survey of Hours and Earnings, Analysis by Residence

Figure 17: Gross earnings as a percentage of the national average at different percentiles, full-time workers, by workplace

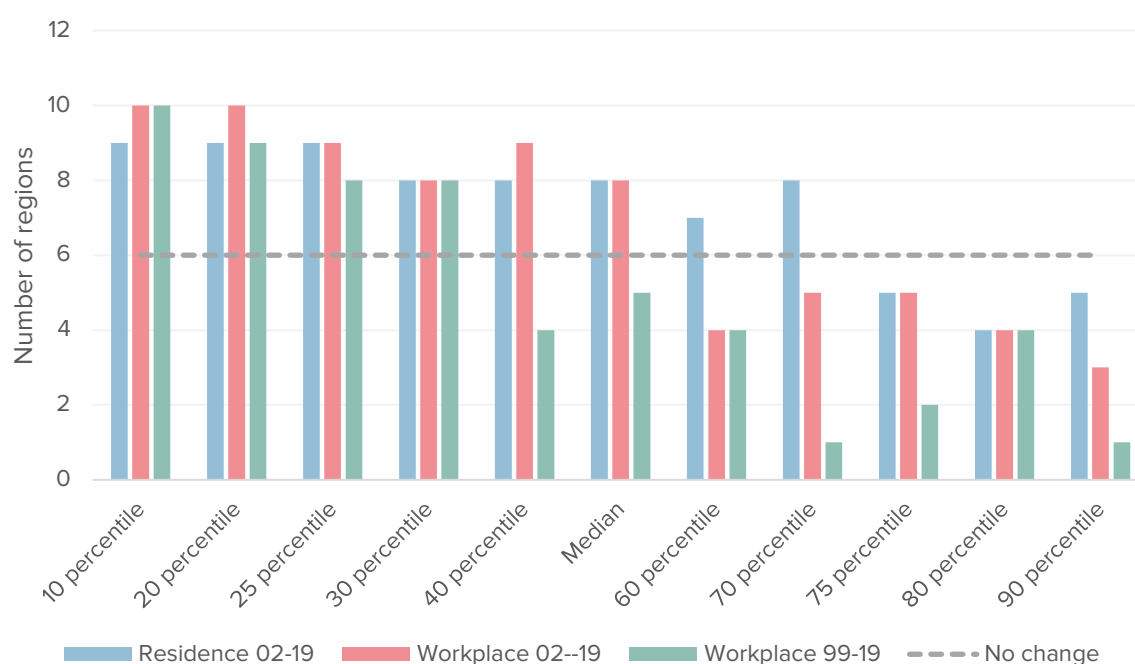


Source: ONS, Annual Survey of Hours and Earnings, Analysis by Workplace

Correspondingly, if we look at the number of regions which have converged or diverged from the national average, we see that at lower levels of pay the majority of regions have converged, while at higher levels the majority have diverged. Looking at workplaces between 1999 and 2019, 10 regions have converged at the level of the 10th percentile, while only one has at the 90th, meaning 11 have diverged.

However, how many regions have converged or diverged is highly sensitive to the start dates and end dates used and whether we look at workplaces or residences. More regions have converged if we look at residence-based measures than workplaces, and there seems to have 18 more divergence if we start from 1999 rather than 2002.

Figure 18: Number of regions converging, different measures



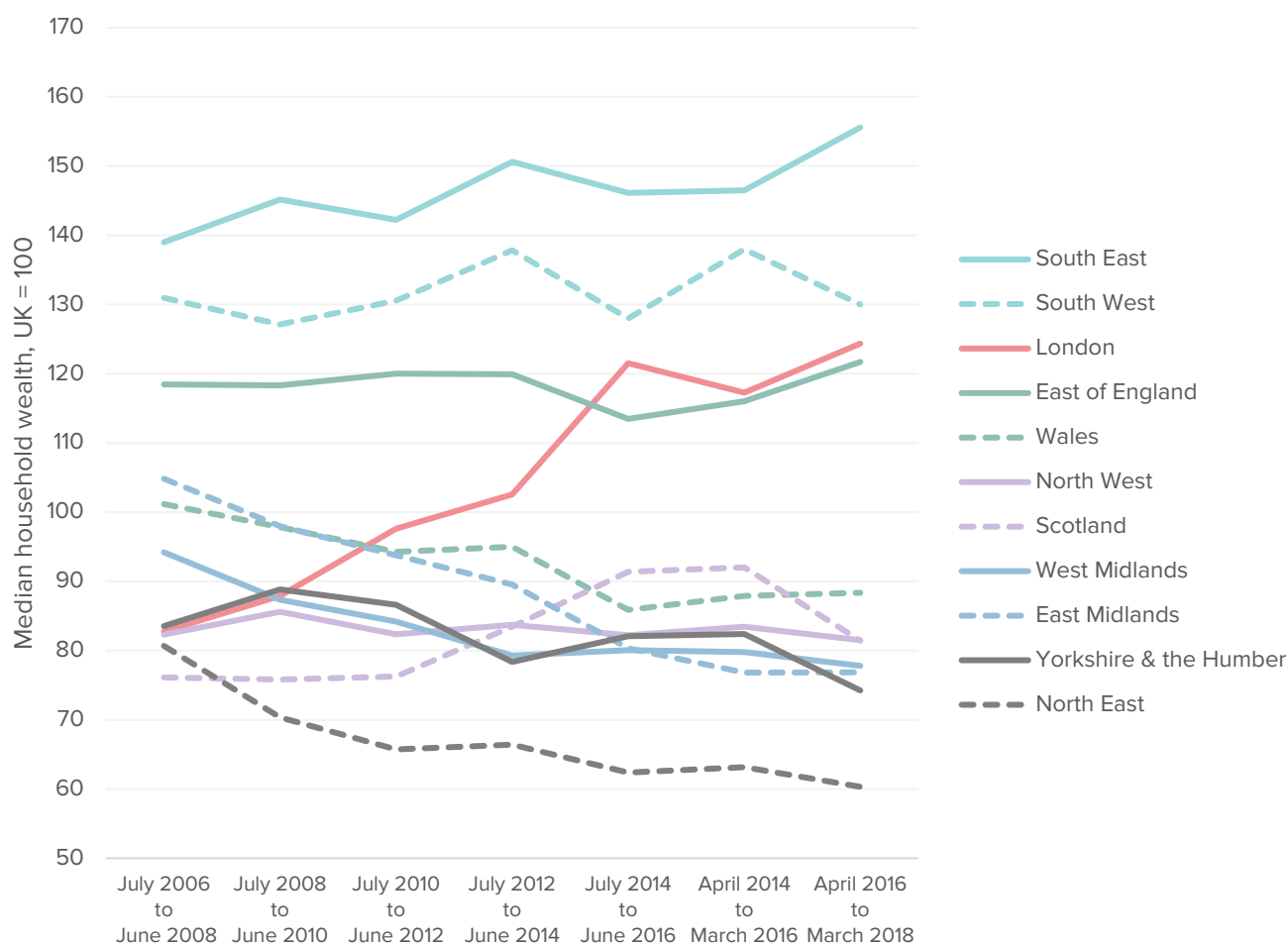
Source: ONS, Annual Survey of Hours and Earnings

Finally we can look at wealth – the *stock* of housing, financial and other wealth, rather than the *flow* of income.

We see clear divergence since the data began in 2006/08. Compared to incomes, the wealth of different regions has a somewhat different ranking. As noted above, the South West has the largest proportion of pensioners of any region. This helps explain why it has the second highest median wealth, despite incomes which are around the national average and value added which is somewhat below.

Over a short period, just a decade, the median Londoner has moved from being 20% below the national average to 20% above.

Figure 19: Median household total wealth



Source: ONS, Wealth and Assets Survey

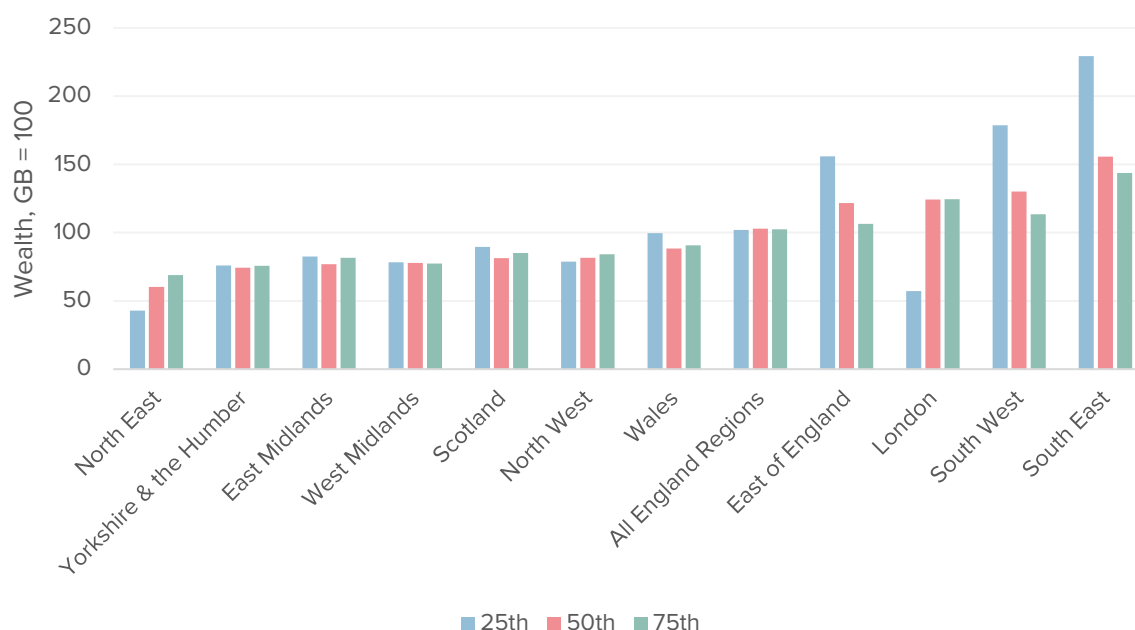
While regional income differences are more pronounced among those higher up the income distribution, wealth differences seem to be larger for those lower down.

We can look at the 25th percentile (i.e. a quarter of people have less wealth) and the 75th (only a quarter have more).

For low to mid income people, wealth differences are much larger than any income difference we have looked at so far. For example, the average person on the 25th percentile in the north east has five times less wealth than someone on the 25th percentile in the south east.

Regional divergence is clear across the period at all three points: the 25th percentile, median and 75th percentile. This analysis does not cover harder to measure issues like the wealth of the top 1% or 0.1% in different regions, where we might also expect to see some differences between regions.

Figure 20: Wealth by percentile, 2016-2018



Source: ONS, Wealth and Assets Survey

One further complexity to the picture is that while median and richer Londoners' wealth is above the national average, poorer Londoners is below. This may be related to radically different rates of home ownership – just 50% in London, but 70% in the South East, 69% in the South West and 67% in the East of England. The bottom 25% in London are a long way off being homeowners. Or it may relate to a larger number of young people or international migrants.

Which of these measures is the “right” one to look at?

There are several differences that explain the different trends we see. Earnings data only covers one type of income – not benefits or property income. HBAI and GDHI cover a wide range of income sources.

HBAI only covers private households so does not include people in nursing or retirement homes or students in halls of residence.

As noted above, HBAI results for median incomes do not capture the large differences at the extremes of the earnings distribution – particularly differences at the top.

One further crucial difference between the national accounts type measures (GDHI and productivity) and the survey-based data (HBAI and earnings) is that national accounts are capturing the implicit income that homeowners receive from living in their property rent free. A paper for the IFS by Sarthak Agrawal and David Phillips highlights this difference over the period 2002-2018.

However, this is only one factor explaining faster growth in London.

Looking at components of GDHI, employment income and self-employment (“mixed”) income increased faster in London than the rest of the UK between 1997 and 2018: 141% and 176% in London, versus 103% and 103% in the rest of the UK without London. Taking out imputed rents still leaves a substantial divergence between London and the rest – GDHI minus this element (“operating surplus”) in London grew from 25% to 43% above the average for the rest of the UK without London.

It is striking that other measures like wealth and the Index of Multiple Deprivation suggest the same improvement in London’s relative performance that the national accounts measures show, but median incomes on HBAI do not.

Having an “After Housing Costs” measure in HBAI is useful, but neither “before” or “after” housing cost measures of income can be said to be the only “correct” measure. On the one hand a property in central London with great access to good jobs, cultural amenities and transport will cost you more than one in a remote area. On the other hand, by paying the higher rent or mortgage costs, you also receive these real benefits, and in the case of mortgage repayments you are also accumulating wealth.

Why might we be concerned about overall divergence of mean incomes per head, if median incomes at the level of large regions have not diverged?

First, it might be that opportunity is influenced by the mean average and changes above the median. If top graduates are increasingly concentrated in a few places (which might influence the mean more than median), that might be reflected in achievement in schools and progression to university: poorer pupils may do better in environments with more children of graduates.

Second, if it is the case that convergence at lower income levels has been driven by the growing bite of the minimum wage / National Living Wage and the extension of tax credits and UC, divergence may re-emerge if these forces for convergence run out of steam. The minimum wage has grown as a share of average wages since creation and will be one of the highest shares in the developed world, but logically it won’t be able to grow as a share of average wages forever. If the underlying dynamism of different areas is diverging, and forces pushing in the other direction weaken, we may see divergence.

Third, divergence driven by changes above the median still affects a large number of people directly, and indirectly affects the experience of the whole community. People at the median income in different areas may gain benefits not captured in income (before or after housing) if they live in a place with more high-income people: it may affect community life, charity and the voluntary sector (being explored in Onward’s social fabric project), and the whole look and feel of an area.

Measures that look only at top level regions may also miss divergences within them – and a strong advantage of using the measures other than HBAI is that we can look at smaller areas where differences or divergences may be greater.

Is Britain converging or diverging when we look at smaller regions?

But it might be that averages for large regions conceal important changes within them? If we were to break up London and other regions into smaller subregions, does the pattern of divergence still hold? What if we took London out of the picture?

If we drop down to NUTS 3 regions (in which Greater London, for example, is broken into 21 subregions), and at income (GDHI) we see there are large differences in income *levels*, particularly between London and the greater south east and the rest.

Unlike *levels* of income, it is harder to make out whether there is divergence or convergence by eyeballing a map.

For the very richest areas, there is clear divergence: top performing subregions in inner London raced away between 1998 and 2017. Kensington and Chelsea / Hammersmith and Fulham (one NUTS3 region) went from having an income over twice the national average to one three times the national average.

GDHI per head (UK average = 100)

Local authority	1998	2017
Camden and City of London	183	237
Westminster	199	272
Kensington & Chelsea and Hammersmith & Fulham	233	309

Figure 21: Income level (GDHI) where UK = 100

Source: ONS, GDHI by top tier local authorities

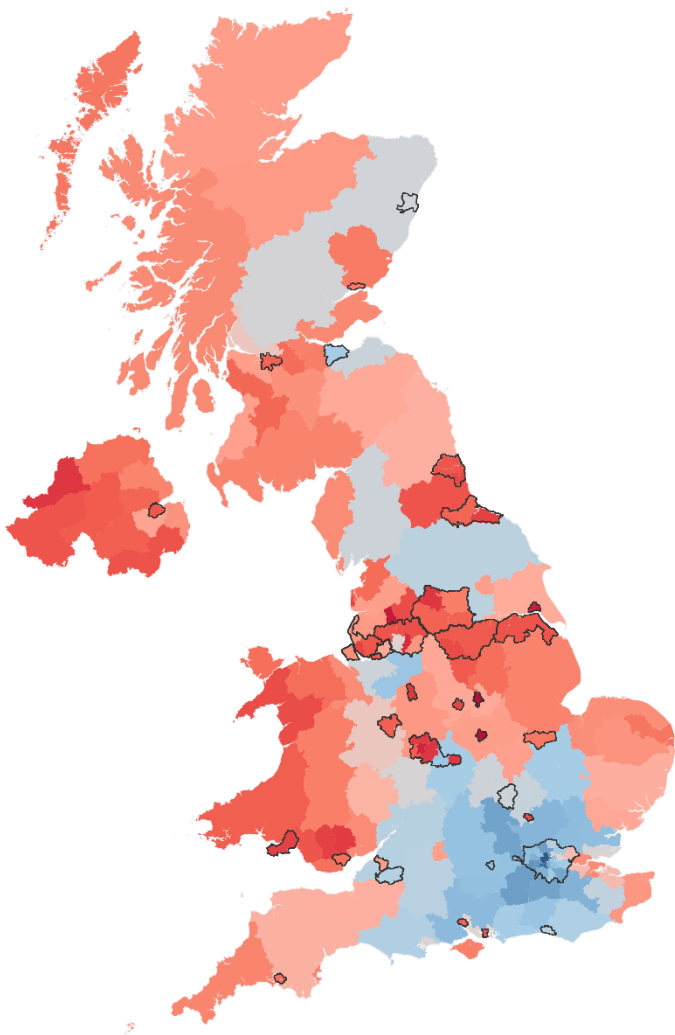
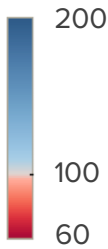
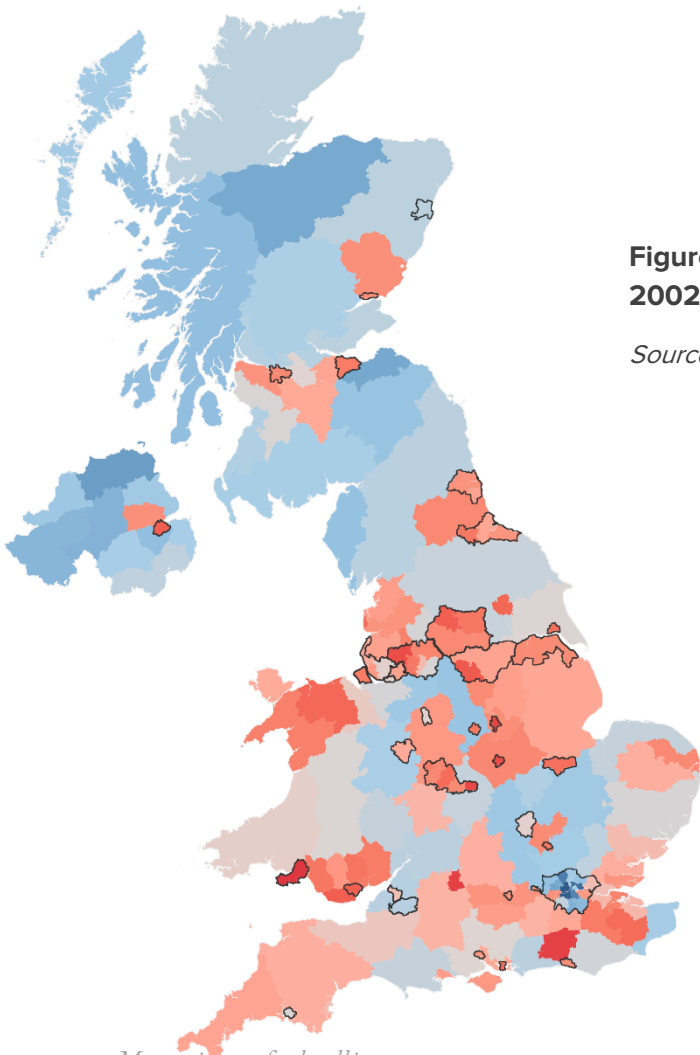
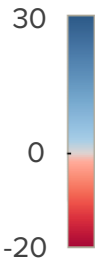


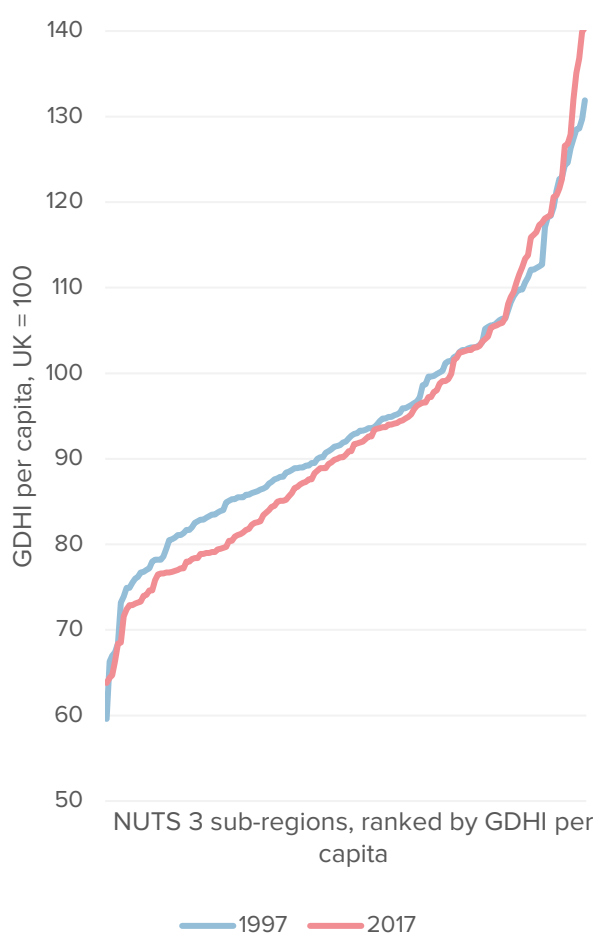
Figure 22: Change in GDHI relative to UK average, 2002-2018

Source: ONS, GDHI by top tier local authorities



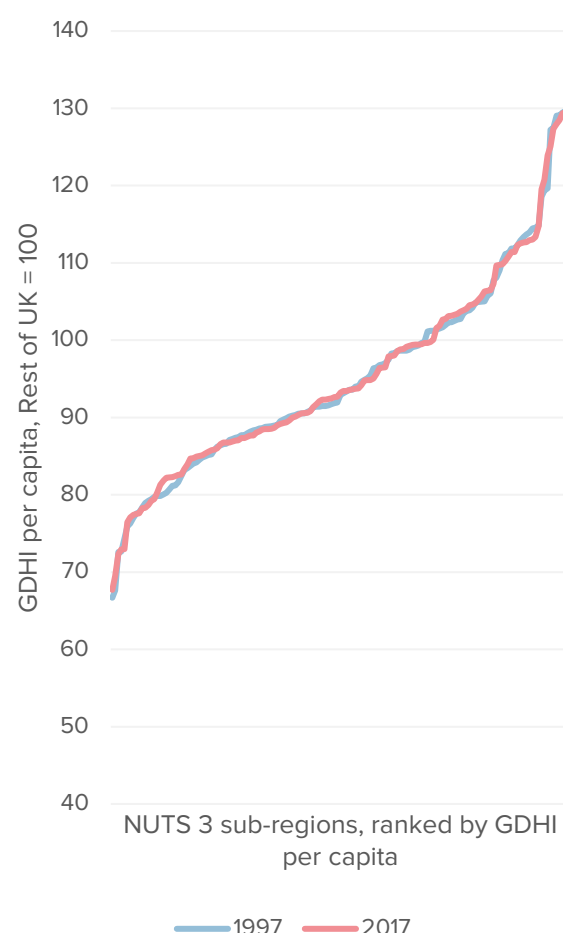
The chart below shows different subregions in order of their income per head. Other regions below the richest areas above have to be shown on a smaller scale for us to see the differences: Camden, Westminster and so on are off the top of the chart below. Looked at in this way it is clear that a large number of regions fell further behind the national average – particularly those not quite at the bottom. Regions that were between the 30th and 60th percentile in 1998 fell 3% further behind the national average by 2017.

Figure 23: GDHI per capita compared to UK, by NUTS 3 regions



Source: ONS, Regional gross disposable household income by NUTS3 region

Figure 24: GDHI per capita compared to rest of UK minus London, by NUTS 3 regions



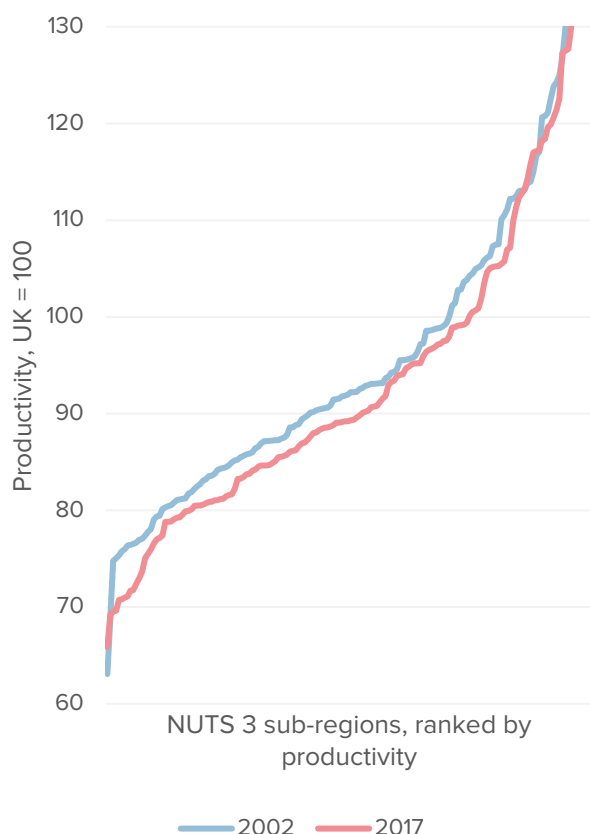
Source: ONS, Regional gross disposable household income by NUTS3 region

However, if we take out London's NUTS 3 regions and re-calculate how areas incomes compared to the rest of the UK average (Rest of UK = 100), then we stop seeing divergence and start seeing, if anything, mild convergence. The top regions in the rest of the UK did not pull ahead in the period 1998-2017, and a number caught up with the rest of UK average.

So - when it comes to incomes at least, regional divergence really seems to be mainly about London versus the rest of the country.

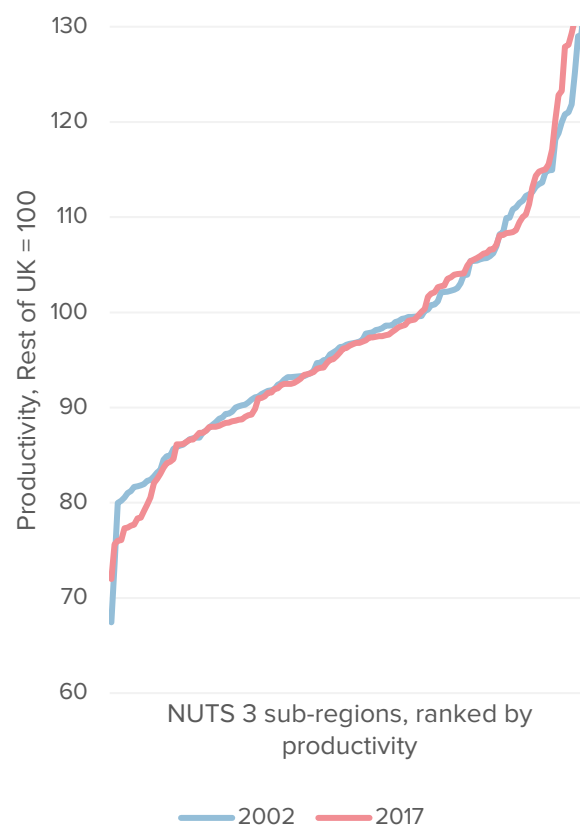
When it comes to productivity, we see the same pattern. If we look at productivity at NUTS 3 level, we see that most areas fell further behind the national average, with a small number of areas in London (Camden, Wandsworth, Westminster) which jumped even further ahead of the national average.

Figure 25: Productivity compared to UK average, NUTS 3 regions



Source: ONS, Sub-regional productivity by NUTS3 region

Figure 26: Productivity compared to rest of UK minus London, NUTS 3 regions



Source: ONS, Sub-regional productivity by NUTS3 region

But if we exclude London, and calculate how regions compared to a Rest of the UK average, we do not see significant convergence or divergence. There are a handful of areas at the bottom of the distribution which fell somewhat further behind. These are older and coastal communities such as Powys, Cornwall and Isles of Scilly, Blackpool, Gwynedd, Torbay and East Ayrshire. And a couple of leading areas pulled further ahead: Milton Keynes, Edinburgh, Aberdeen, Solihull. But, overall, the distribution looks very similar.

We can see the same trends in a different way if we look at the level of and change of GDHI and productivity on a map. The charts below show the change compared to the national average – so that going from 100% to 90% of the UK average would equal -10. Although regions in Scotland and Northern Ireland have seen both income and productivity grow at or faster than the national average, in the rest of the country outside London there is little evidence of convergence or divergence.

Figure 27: Change in GDHI, 1997-2018, relative to UK average

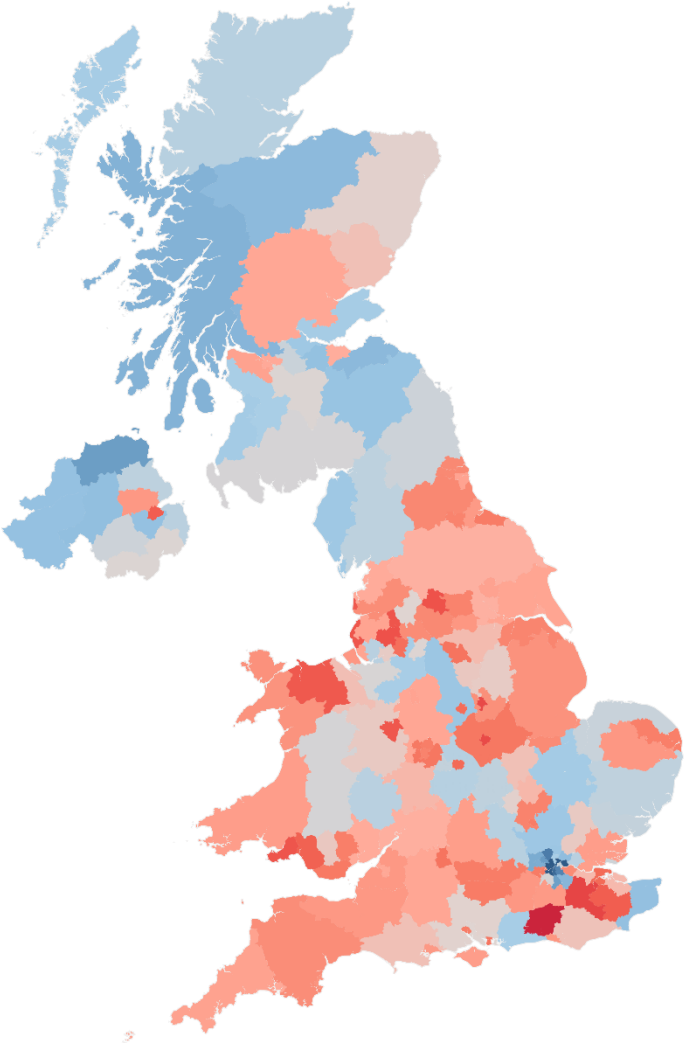
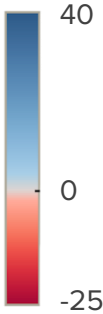
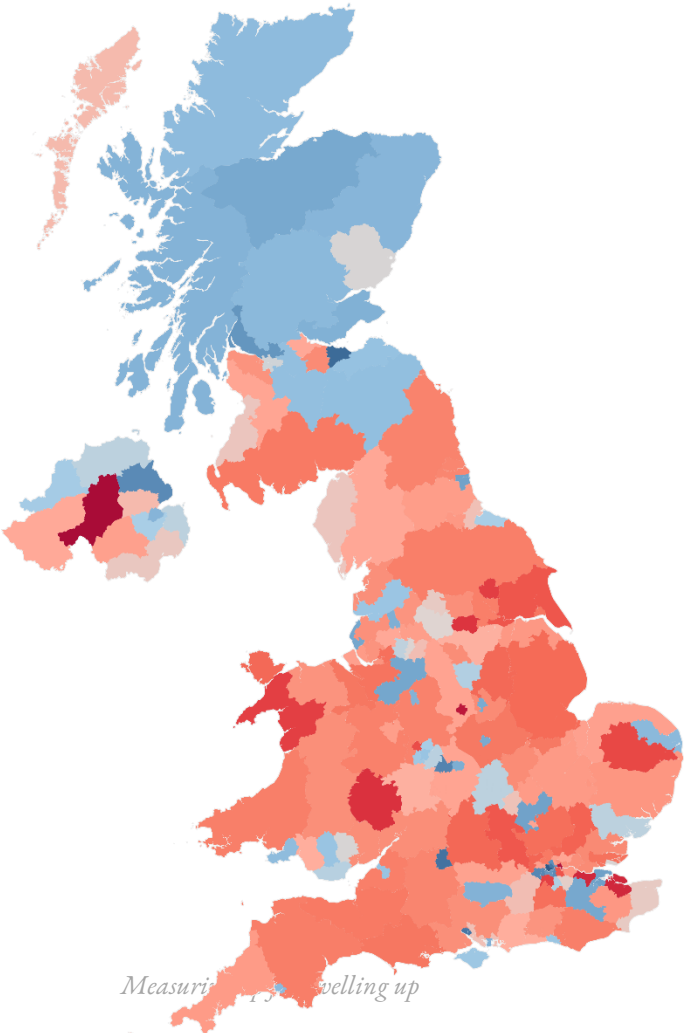
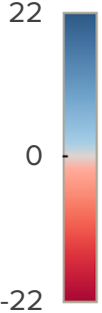


Figure 28: Change in productivity per job, 2002-2018, relative to UK average

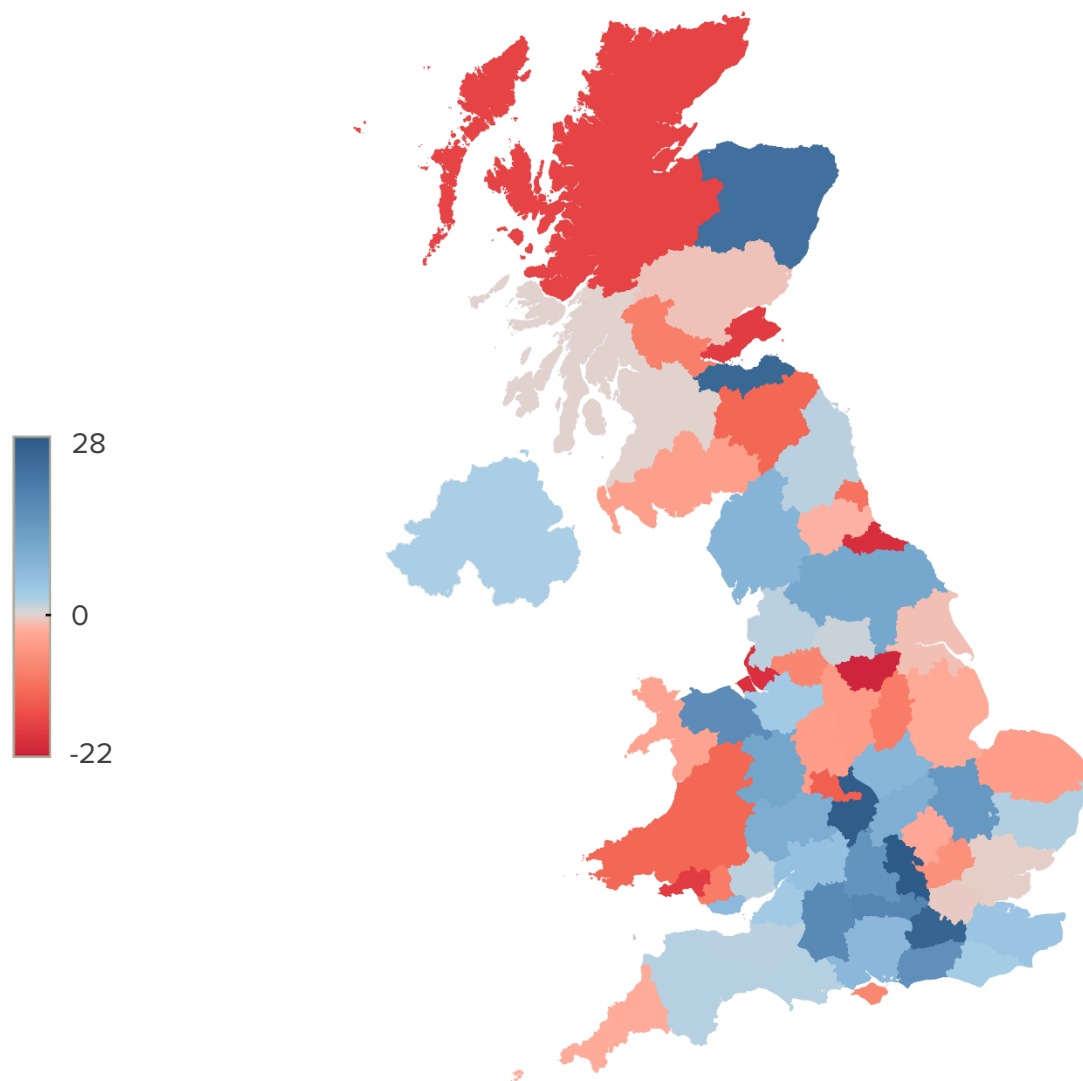


But would the same story – of divergence mainly between London and the rest – still hold if we looked further back in time?

Sub-regional estimates of GDP are available for counties from 1977 to 1995, although a caveat is needed that they were compiled on a different basis to current data on sub-regional GVA.

If we look at the 62 areas outside London, there was clear divergence between 1977 and 1995: both a north-south split and an urban-rural one. The south east and affluent parts of Scotland gained ground, while the north, midlands and wales lost ground relatively. Shires gained ground while industrial urban areas like Merseyside, South Yorkshire, West Midlands county, South Wales and Teesside fell dramatically back.

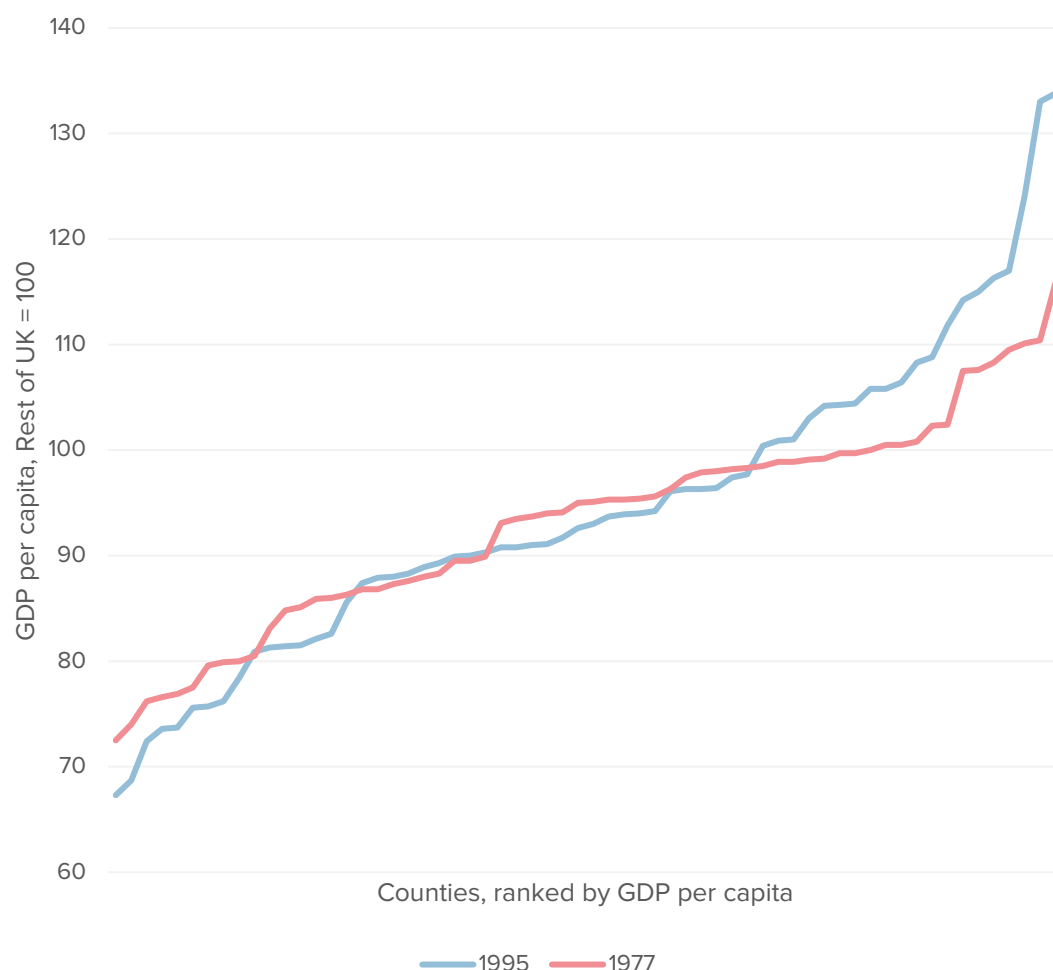
Figure 29: Change in GDP per head compared to the UK average, 1977-1995



Overall dispersion increased: areas where GDP per person was highest were further ahead of the national average in 1995 compared to 1977, while the lowest regions were further behind.

Unlike the period since the mid-1990s, the relative position of London as a whole was almost unchanged over this period, stable at around 40% above the national average.

Figure 30: GDP per capita by county, ranked excluding London



As the map above shows, the largest relative declines were generally in heavily industrialised and port areas in the north, midlands and Wales, while the largest gains were in the south east and wealthier parts of Scotland. The scale of the decline for places like South Yorkshire, Cleveland (aka Teesside) and Merseyside were the equivalent of dropping by 20% of the national average, while places like Buckinghamshire, Warwickshire, Surrey and Lothian (the area around Edinburgh) made equivalently large gains.

Table of GDP per capita by county, (UK = 100)

Biggest declines	1977	1995	Change	Biggest gains	1977	1995	Change
South Yorkshire	97	76	-22	Oxfordshire	94	109	15
Cleveland	110	90	-20	West Sussex	87	103	16
Merseyside	94	74	-20	Clwyd	78	94	16
Fife	100	82	-18	Wiltshire	98	115	17
West Glamorgan	99	81	-18	Berkshire	116	134	18
Highlands and Islands	99	81	-17	Grampian	110	133	23
West Midlands	110	96	-13	Lothian	100	124	24
Borders	101	88	-13	Surrey	83	108	25
Dyfed & Powys	85	72	-12	Warwickshire	74	101	27
Tyne and Wear	98	87	-11	Buckinghamshire	90	117	28

Source: ONS, historic estimates of GDP by county

So we can think of divergence as being in two phases – divergence between industrial areas and the rest between the 1970s and mid-1990s, and between London and the rest since then.

We can also look at earnings for the earlier period using the New Earnings Survey, which ran from the 1970s to the early 2000s.

Looking at mean earnings for men over time we see clear divergence between the mid-1970s and the mid-1990s. This is larger if we include London boroughs, but is also clear if we exclude London.

Figure 31: Male mean earnings, counties and boroughs

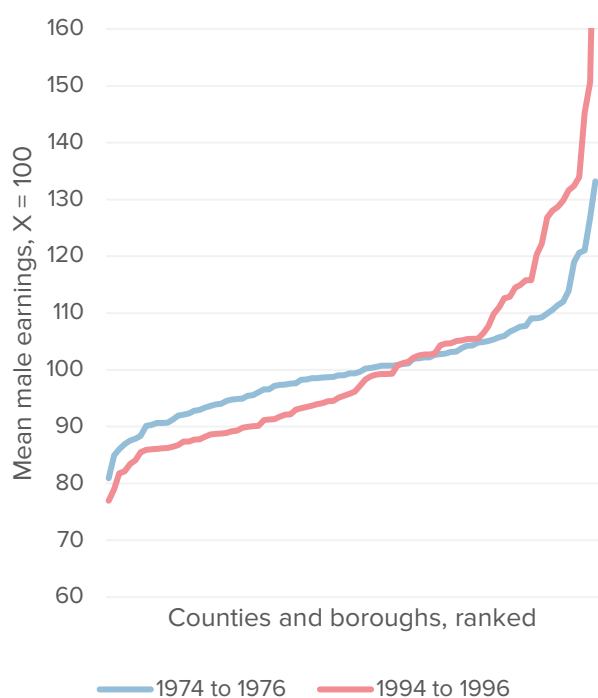
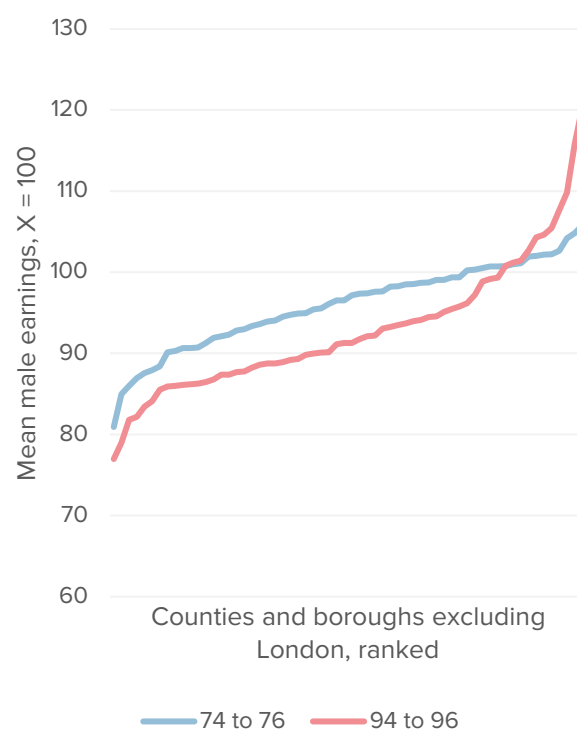


Figure 32: Male mean earnings, counties excluding London



Source: ONS, New Earnings Survey, Mean Earnings, Full Time Men

Table of male mean weekly earnings (UK = 100)

Biggest declines	1974 – 1976	1994 – 1996	Change	Biggest gains	1974 - 1976	1994 - 1996	Change
Highland	105	86	-18.7	Hammersmith	119	134	15.0
Cleveland	106	92	-13.7	Hillingdon	112	129	16.7
Mid Glamorgan	98	86	-12.1	Berkshire	102	120	18.1
Gwent	97	86	-11.4	Southwark	110	128	18.1
South Yorkshire	99	89	-10.6	Islington	111	130	18.4
Tyne and Wear	99	89	-10.0	Lambeth	114	132	18.5
Havering	108	98	-9.4	Wandsworth	104	127	23.0
Fife	98	89	-9.4	Westminster	127	151	23.8
West Glamorgan	99	90	-8.9	Tower Hamlets	107	145	38.5
Strathclyde	101	92	-8.6	City of London	133	194	61.2

Source: ONS, New Earnings Survey, Mean Earnings, Full Time Men

Although local government changes make comparison difficult for some areas - particularly in Scotland and Wales - if we look across areas for which data is available for both the New Earnings Survey and the more modern Annual Survey of Hours and Earnings we see that industrial areas which lost ground in the 70s to the 90s have not recovered ground in the years that followed. Most have fallen further behind.

Table of male mean weekly earnings (UK = 100)

	1974-76	1994-96	1997	2010	2019
South Yorkshire	99	89	88	87	86
Fife	98	89	91	88	86
Wales	97	88	89	83	85
Derbyshire	98	90	88	86	86
Tyne and Wear	99	89	87	87	87
Northumberland	95	86	81	82	84
Merseyside	101	93	94	89	90
Durham	96	88	87	81	86
Staffordshire	95	87	91	87	87
Greater Manchester	97	94	95	93	91
Lancashire	93	90	91	89	89
Scotland	99	93	93	94	94
West Yorkshire	94	91	89	90	90

Source: ONS, New Earnings Survey, and Annual Survey of Hours and Earnings, various years

Finally, it is worth noting that, because of the demographic divergences described above, and underlying economic divergences the tax and benefit system are doing more to redistribute income around the country than before.

If we look at income (GDHI) by lower tier authority in 1997 and 2018 we see that there has been some divergence. If we make a curve of local authorities by income level and cumulative population, 22% of the UK population live in local authorities where income is 20% or more below the national average, compared to 14% in 1997 (though this divergence is highly sensitive to where on the distribution we measure it).

If we look at the balance of primary income (i.e. before the effects of the tax and benefit system) we see not just bigger differences but a much bigger divergence over time. 22% of the UK population live in local authorities where primary income is 20% or more below the national average, compared to 35% in 1997.

To put it another way, in 2018 around 31% of people lived in local authorities which saw the actions of the tax benefit system boost local income by 5% of the national average or more, up from 20% in 1997. There is no way to say how much of this reflects demographic divergence, economic divergence or policy changes. But it does imply that the variation of local incomes around the country may be more sensitive to policy changes, be it in different taxes or the state pension or other benefits.

Figure 33: GDHI by local authority, ranked, share of UK population at different levels

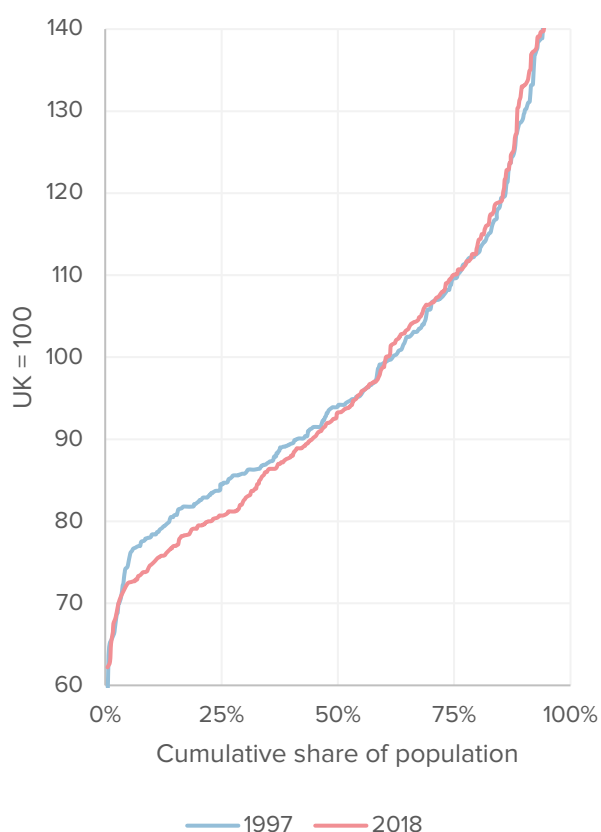
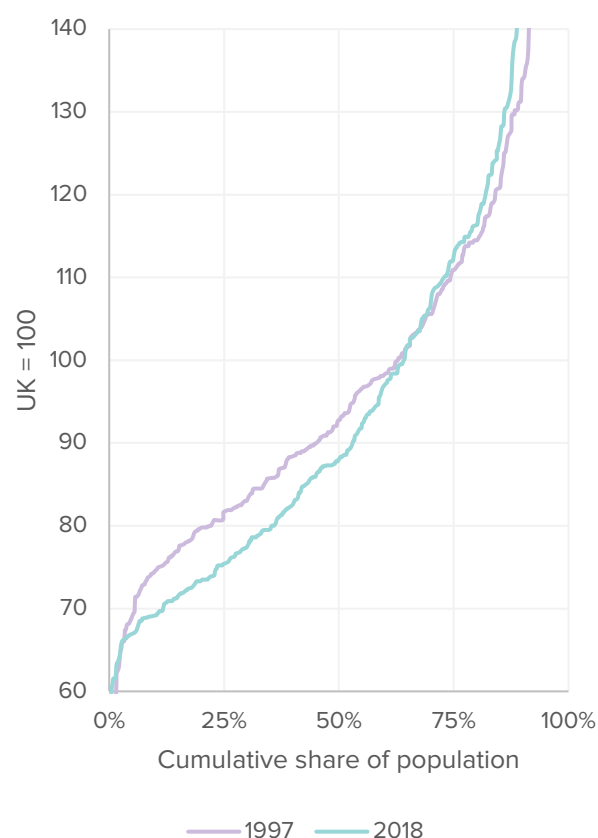


Figure 34: GDHI primary income balance by local authority, share of UK population



Source: ONS: Gross Disposable Household Income at current basic prices, lower tier LAs

Conclusions

To summarise what the different measures show us about divergence or convergence:

- GDP growth and population growth have been very different across the country, with stronger population growth in areas that are generally richer.
- London's demographics have dramatically diverged from other areas, with a population which has got younger, and a growing gap between it and the rest of the country in terms of the proportion of people with a degree.
- In absolute terms, claimant count unemployment rates had converged pre-crisis compared to the early 1980s or 1990s - for the simple reason that unemployment was lower. This is probably the measure on which we see most convergence.
- Employment rates show some signs of convergence if we look at 16-64 year-olds, but not if we look at 16+ employment. This partly reflects a younger population in London, with a greater proportion of adults below pension age, but also higher rates of employment for people of pension age in London.

Turning to income and output measures:

- Income per head (GDHI) suggests strong divergence in performance, with divergence even stronger if we look at GDHI before taxes and transfers.
- Differences in productivity per worker are smaller, but we still see divergence. Per hour productivity gaps are smaller and suggest smaller divergence. Per hour productivity *excluding property income* suggests no real pattern of convergence or divergence.
- *Median* incomes data from HBAI suggest strong convergence of post benefit income, slightly more so after housing costs, and slightly more for the working age. But *mean* incomes data on the same basis suggests divergence.
- ASHE data suggests that full time workers who are lower earners have seen convergence, but higher earners in different regions have experienced divergence.
- Patterns of wealth also show very clear divergence, at all levels of wealth. Differences in net wealth are larger for low-to-mid wealthy people, for whom the gaps between regions are much bigger than for any measure of income.
- If we drop down to smaller NUTS 3 regions, we see divergence of incomes and productivity. But if we exclude London regions these divergences essentially disappear. There is no convergence, but divergence over the last 25 years or so is essentially a story about London and vs the rest, at least in England and Wales.

- But if we go back further in time to include sub-regional output data back to the 1970s, the pattern shows a much stronger divergence of GDP and earnings between former industrial areas and the more services driven economy of the greater south east and parts of Scotland.

So... is Britain diverging or converging?

- When it comes to production and incomes per head the divergences may be bigger than they appear to the (median) average man or woman in the street because much of the divergence is driven by above average-income people.
- Because of differences in employment rates and demographics, productivity divergences look much smaller than income differences. But total income is a better measure of welfare, because we care about employment as well as earnings. Wealth data suggests strong divergence and big differences.
- Smaller area analysis suggests two phases of divergence. The first saw divergence between industrialised areas and the greater south east from the 1970s to the mid-1990s. The second saw divergences of income and productivity between London and the rest of the country.
- Though there are some measures which show convergence, particularly absolute differences in unemployment rates, it is probably truer to say that Britain has been diverging than converging.

Chapter Two

How does the performance of different areas in Britain compare to other developed countries? Are levels of income and output more unbalanced?



One conventional way of looking at how geographically unbalanced the UK is compared to other countries is to look at large regions.

This has the problem that there are relatively few data points and differences may be driven by differences in administrative geographies. If regions are bigger in one country, there will appear to be smaller differences between them, as differences within parts of large regions will likely average out.

The OECD and Eurostat have tried to develop methods to make regions comparable at different scales. But there are still huge differences which will tend to skew results. For example, Eurostat has three levels of analysis called NUTS 1, 2 and 3.

Greater London (population 8.7m in 2016) counts as one region at NUTS 1, but is broken into 5 sections at NUTS 2 (e.g. Inner West London) and then into 21 at NUTS 3 (e.g. Westminster).

In contrast, the Île de France (population 12.1 million) is one region at NUTS 1, *still* just one region at NUTS 2 and just 8 regions even at NUTS 3. Of these eight, one of them (Paris) has 2.1 million people, making it about six times bigger than the typical region in the UK.

The average NUTS 3 region in France has 660 thousand people, compared to 367 thousand in the UK and just 206 thousand in Germany. The smaller the “lumps” the greater variation will be between them, making comparison difficult.

Decisions about how to carve up large and rich cities are particularly crucial – because London is broken into much smaller bits than Île de France / Paris, a part of London tends to rank as dramatically the richest part of Europe, and the UK will automatically look more unbalanced.

The OECD also has TL1 TL2 and TL3 regions, which are similar to Eurostat, with the exception of the middle level – TL2 is the same as NUTS 2 for most EU member states, except France, Germany Belgium and the UK where it is the same as NUTS 1. The OECD produces measures for a series of metro areas which aim to capture the functional geography of city regions.

In a 2018 paper Philip McCann exhaustively measures a series of different variables (GDP per head, GVA per worker, disposable income per person) and a series of different metrics (the gap between top and bottom regions, the gap between the top and bottom 10% or 20% of regions, the Gini coefficient, and coefficient of variation). He looks at TL2 regions, TL3 and metro regions.

Ranking where the UK sits in international context it is clear that the UK tends to sit fairly high up the ranking. Where 1 is the most unequal, the UK ranks as follows in his analysis:

GDP per capita

5/27: Top/bottom OECD TL2 regions GDP per capita

1/26: Ratio top/bottom OECD TL3 regions GDP per capita

5/27: Difference top/bottom OECD TL2 area GDP per capita divided by national GDP per capita

1/26: Difference top/bottom OECD TL3 area GDP per capita divided by national GDP per capita

9/26: Gini index regional GDP per capita OECD TL2 regions

1/27: Gini index regional GDP per capita OECD TL3 regions

5/23: Coefficient of variation GDP per capita EU NUTS-2 regions (including metro urban regions)

11/22: Coefficient of variation GDP per capita EU NUTS-3 regions (including metro urban regions)

8/19: Difference top/bottom OECD metro urban area GDP per capita divided by national GDP per capita

5/19: Ratio top/bottom OECD metro urban area GDP per capita

6/20: Ratio top/bottom GDP per capita EU NUTS-2 region (including metro urban regions)

6/22: Ratio top/bottom GDP per capita EU NUTS-3 region (including metro urban regions)

4/22: Ratio top 10%/bottom 10% GDP per capita EU NUTS-2 regions (including metro urban regions)

4/26: Ratio top 10%/bottom 10% OECD TL2 regions GDP per capita

6/26: Ratio top 20%/bottom 20% OECD TL2 regions GDP per capita

2/27: Ratio top 10%/bottom 10% OECD TL3 regions GDP per capita

4/26: Ratio top 20%/bottom 20% OECD TL2 regions GDP per capita

11/22: Ratio top 10%/bottom 10% GDP per capita EU NUTS-3 regions (including metro urban regions)

GVA Per worker

2/25: Ratio top 10%/bottom 10% OECD TL2 regions GVA per worker

5/25: Ratio top 20%/bottom 20% OECD TL2 regions GVA per worker

3/27: Ratio top 10%/bottom 10% OECD TL3 regions GVA per worker

6/27: Ratio top 20%/bottom 20% OECD TL3 regions GVA per worker

Disposable income per person

4/27: Ratio top 10%/bottom 10% OECD TL2 regions RDI per person

4/27: Ratio top 20%/bottom 20% OECD TL2 regions RDI per person

1/11: Ratio top 10%/bottom 10% OECD TL3 regions RDI per person

1/11: Ratio top 20%/bottom 20% OECD TL3 regions RDI per person

5/26: Gini index regional RDI per capita OECD TL2 regions

1/11: Gini index regional RDI per capita OECD TL3 regions

Source: Philip McCann, Perceptions of regional inequality and the geography of discontent (2019)

While McCann's paper represents the state of the art, and strongly suggests the UK is more unbalanced than most similar countries, we might still wonder how much we can ever really answer the question about how relatively balanced growth is or is not, because so much turns on the size of the unit of analysis, and the treatment of large rich cities. Ranking how unequal we are also doesn't give us a feel for *how big* such differences are between countries or how much they matter.

Comparison of countries that are radically different sizes is fundamentally tricky: you either have a very different number of regions or a very different size of unit, influencing how much variation you see between regions. Comparisons between similar sized countries are most reasonable.

Using disposable income is preferable to using GDP per resident for the reasons mentioned above – to avoid the problem of commuters. Sadly, it is only available at NUTS 2 level for most countries, meaning the best combination of data and region size is not available.

Looking at some large countries we can rank regions by income and make a curve showing what proportion of people live in regions below a given threshold.

Looking at the UK, France and Germany, we see that there is a roughly normal distribution with a few very poor regions and a few very rich regions. But the curve for the UK is much steeper. In the UK about 39% of people live in NUTS 2 regions that are 10% below the national average income, nearly twice as many as in Germany (20%) and compared to just 12% in France. At the top end we see a small number of really rich areas – much richer than anything in France or Germany. Indeed, the chart cuts off the top UK region – Inner London West – which is 244% of the national average. That said, there would almost certainly be a bit more variation in France if the Île de France (about a fifth of the population) was broken into smaller units as London is.

Instead the regional differences in the UK are more like those seen in Spain and Italy. The UK looks similar to Spain, albeit that the UK has one spectacularly wealthy area. Italy has a number of very poor regions, all of which are in the south of the country, which are separated by a sort of “cliff edge” in performance from the northern half of the country.

If we drop down to smaller regions (NUTS3) the differences between Great Britain, France and Germany get a bit smaller. While Germany does, France does not provide disposable income statistics at NUTS 3 level (sadly, Japan is the only other large country that does).

Looking at disposable income per head, we can only compare with Germany, and we see that 35% people live in areas 10% below average in Great Britain and 24% in Germany. This is still a big gap, but no longer double. Again, the chart is truncated, because the top UK regions (Camden, Kensington and Chelsea and Westminster) are 240-250% of the national average.

Figure 35: Proportion of people living in regions below different proportions of national average disposable income

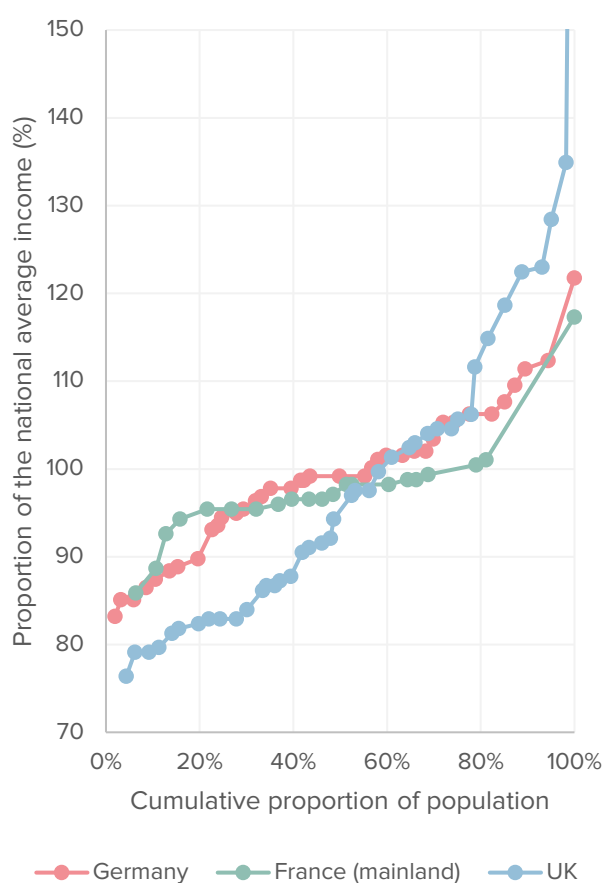
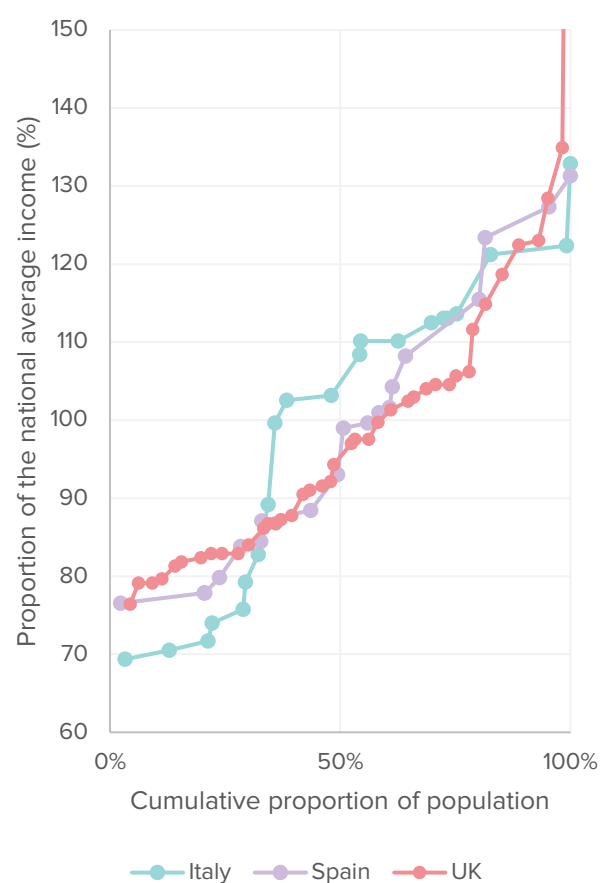


Figure 36: Proportion of people living in regions below different proportions of national average disposable income



Source: Eurostat, Disposable income of private households by NUTS 2 regions, 2016

Proportion of people living in regions below different thresholds as a share of national average

	NUTS 2 disposable income		NUTS 3 disposable income		NUTS 3 GDP per capita	
	90%	80%	90%	80%	90%	80%
UK / GB	39	11	35	12	62	43
France	12	0			60	35
Germany	20	0	24	2	52	36

Source: Eurostat, GDP per capita and Disposable income of private households by NUTS 2 & 3 regions, 2016

France does provide data on GDP per capita at NUTS 3 – although this comes with the health warnings described above about the impact of commuting. Germany has no large city with commuter flows compared to London.

Looking at GDP per capita we see that around 60% of people in the UK live in areas 10% below the national average, compared to 52% in Germany. This remains a substantial gap, but is smaller than at NUTS 2 level.

The chart is even more truncated, as commuting plus small areas leads to high variations. In France the posh commuter belt west of Paris (Hauts-de-Seine) is at 311% of the national average, Wolfsburg (home to Volkswagen HQ) is at 470% of the national average while Camden & the City of London is an absurd 1,265% of the national average – showing why this is not a good measure for central business districts.

To conclude, the data we would *ideally* like to have to answer the question of how imbalances in the UK compare to other countries doesn't really exist.

On the one hand, we should be wary of parochially thinking that Britain is unique in having large regional disparities. We should be wary of the quality and meaningfulness of the data and reliance on single snapshot measures.

On the other hand, it seems clear that the UK is more unbalanced than other similar countries, and is often the most unbalanced on a range of measures. Compared to a relatively geographically balanced economy like Germany, about a fifth more of the UK population live in places that are 10% or 20% below the national average income.

Figure 37: Proportion of people living in regions below different proportions of national average GDP per capita

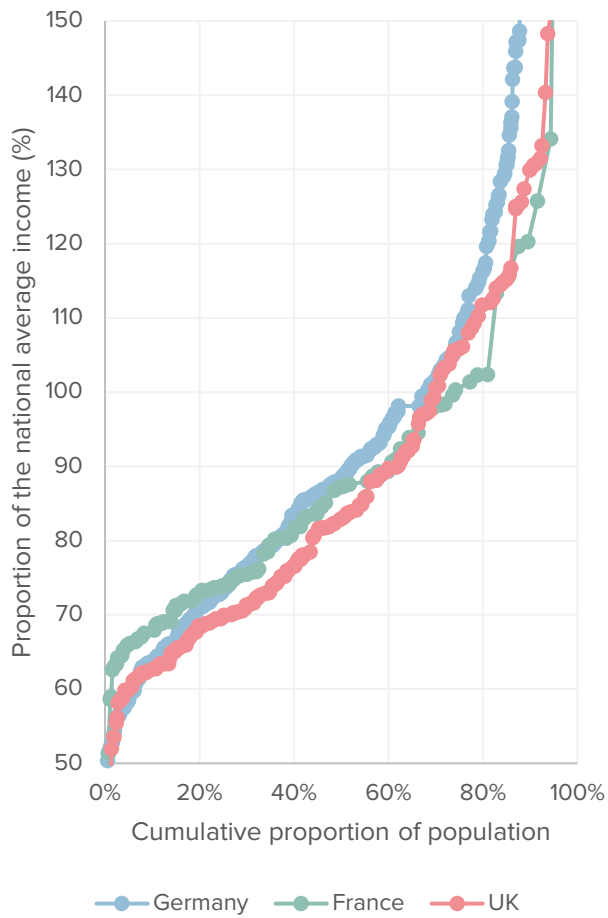
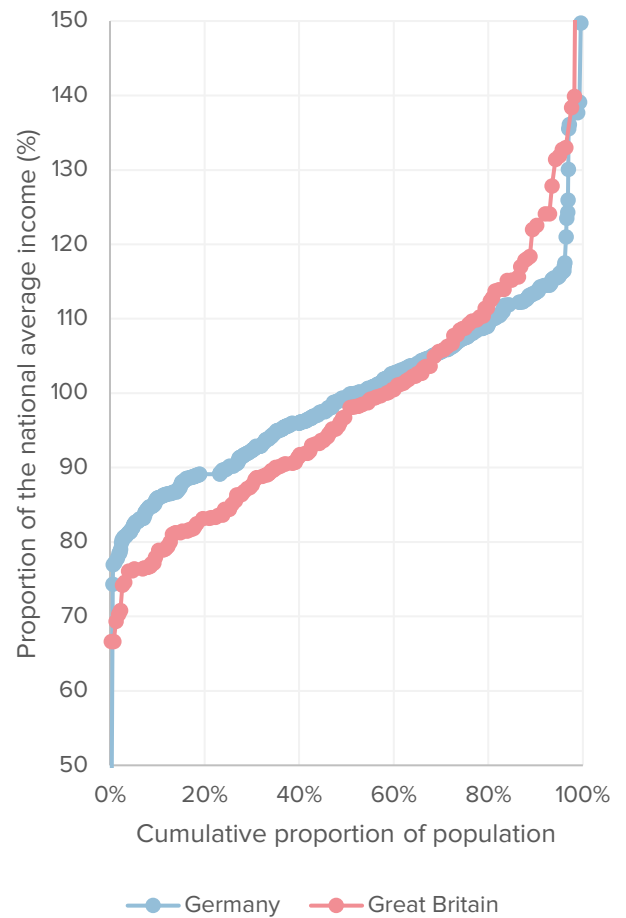


Figure 38: Proportion of people living in regions below different proportions of national average GDP per capita



Source: Eurostat, GDP per capita and Disposable income of private households by NUTS 3 regions, 2016

Chapter Three

*Are the cores of our cities now doing better than towns
and their surroundings?*



In recent years there has been a lot of discussion about cities and towns. First there was a debate about whether our large cities are underperforming, and concern about their relative underperformance led to a range of actions, from city devolution to the “Northern Powerhouse” initiative, which aimed to unlock for the conurbations of the north some of the agglomeration gains London was perceived as enjoying.

This was followed by a debate about whether smaller towns and cities were being left behind or ignored. The formation of the “Centre for Towns” think tank as a rival to the longer standing “Centre for Cities” underlined this debate. Much of the discussion in the lead up to the 2019 election and afterward focussed on “left behind towns”.

There was also a debate about whether the core parts of large conurbations were outpacing the outer parts of the same conurbations. Are towns and outer parts of conurbations being left behind in some sense?

We will look first at whether cities are doing better or worse than the rest of the country, and then we will look at differences between the “cores” of our cities and the rest.

Large cities vs the rest

The first thing that is clear is that the performance of cities looks very different if we look at income growth or productivity growth. In fact, they tell almost opposite stories. Cities grew their productivity more quickly than the rest of the country, but income per person grew more slowly.

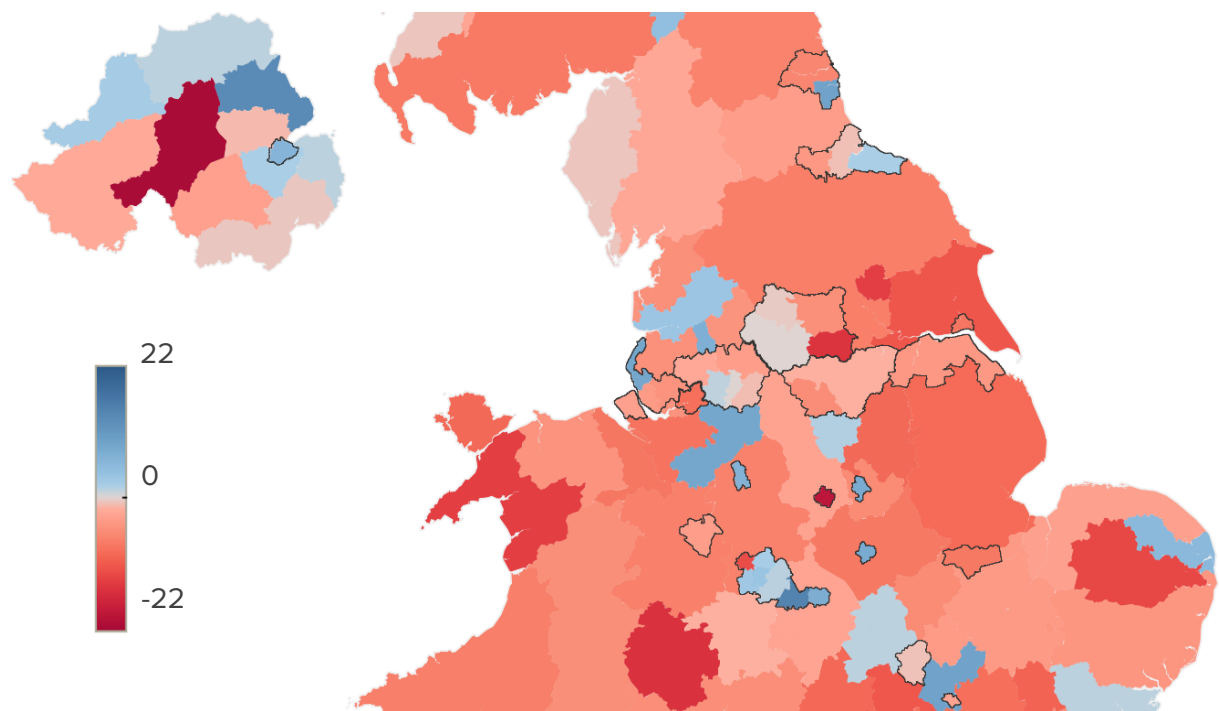
The maps below show the change 2002-2018 compared to the national average. So, either a change from the national average to 10% below, or indeed a change from 20% above to just 10% above would both score as -10.

The pictures for the larger cities are a mirror image of one another: cities do better than their surroundings on productivity growth, but worse on income growth.

This pattern of faster *productivity* growth in cities but slower *income* growth, is true for large cities in England other than London, but also holds for the largest cities in Scotland, Wales and Northern Ireland compared to their surroundings.

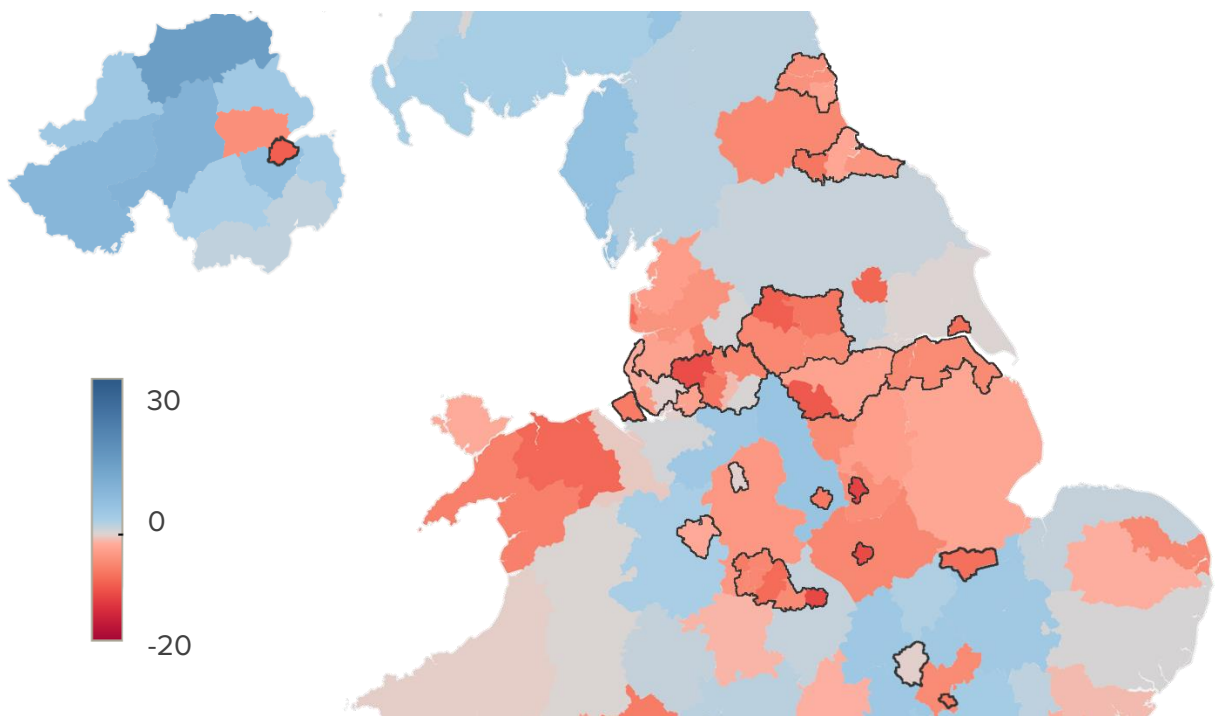
Larger English cities outside London are also at a lower level of productivity than England outside London, which is not true for cities in Scotland, Wales or Northern Ireland.

Figure 39: Productivity growth relative to national average



Source, ONS Sub-regional productivity by NUTS3 regions, productivity per worker, change 2002-2018

Figure 40: Income growth relative to national average



Source, ONS, Gross Disposable Household Income by NUTS3 regions, change 2002-2018

Productivity and income growth	Productivity per job growth 2002-2018	GDHI growth 2002-2018	Productivity level 2018 (UK=100)	GDHI level 2018 (UK=100)
Large English cities exc. London	54%	50%	87	79
Rest of England outside London	49%	60%	94	102
Gap	5%	-10%	-7	-23
Edinburgh & Glasgow	76%	53%	104	95
Rest of Scotland	62%	65%	93	92
Gap	14%	-12%	11	3
Cardiff & Swansea	59%	42%	89	81
Rest of Wales	47%	53%	79	81
Gap	12%	-11%	10	0
Belfast	72%	44%	99	79
Rest of NI	49%	72%	84	83
Gap	22%	-27%	15	-4
London	63%	79%	140	139
UK	56%	62%	100	100

NB Large English cities = Metropolitan counties of Tyne & Wear, Merseyside, Greater Manchester, West Yorkshire, South Yorkshire, West Midlands, plus Nottingham, Derby, Leicester, Portsmouth & Southampton and Bristol

Inner cities and outer city regions

In terms of simple Gross Value Added (GVA, the main component of GDP), the core parts of our large cities do appear to be growing faster than the areas around them if we look at NUTS3 regions.

This is most visible in Inner London or places like Manchester City, where statistics distinguish the inner core of the conurbation from the rest. In general, larger cities and national capitals saw the core area of the city outperform. One exception is Birmingham. There, the very large local authority of Birmingham includes both the core of the city, but also much of its hinterland (we will use earnings data to look inside the city in a section below)

There are other places where a core-periphery distinction might not be well captured at the NUTS 3 level. For example, a city like Leeds in a sense represents the “centre” of the conurbation of West Yorkshire, but West Yorkshire is a more polycentric conurbation than say, Greater London or Greater Manchester, as it has a number of distinct cities with gaps in between.

Still, despite the limits of using this definition to identify the core, all but one of 16 city cores either gained GDP share within their surrounding region, or held their own. Sheffield is the only exception. More of production in these places is happening in the core area of the cities.

This may be partly explained by the shift towards a services-based economy, or the growth of higher education, both of which tend to take place in the centres of cities, or more generally by a revival of interest in urban living.

Inner city share of outer city region GVA, 1998 and 2018

	1998	2018	Change
Inner London share of London	60%	69%	8%
Edinburgh as a share of East Scotland	36%	43%	7%
Manchester share of Greater Manchester	26%	32%	5%
Nottingham as a share of Nottinghamshire	34%	39%	5%
Cardiff & Vale of Glamorgan as a share of East Wales	44%	48%	5%
Belfast as a share of Northern Ireland	29%	32%	3%
Liverpool share of Merseyside	37%	40%	3%
Leeds share of West Yorkshire	44%	47%	3%

Inner city share of outer city region GVA, 1998 and 2018 (cont.)

	1998	2018	Change
Bristol as a share of Gloucestershire, Wiltshire and Bath/Bristol area	18%	20%	2%
Swansea as a share of west wales and the valleys	14%	15%	1%
Derby as a share of Derbyshire	31%	32%	1%
Tyneside as a share of the North East	35%	36%	1%
Birmingham share of West Midlands	41%	42%	1%
Leicester as a share of Leicestershire	31%	31%	0%
Glasgow as a share of west central Scotland	54%	54%	0%
Sheffield as a share of South Yorkshire	47%	46%	-0.3%
Average change			3%

Source: ONS, Regional gross domestic product (GDP) reference tables, Gross Value Added (Balanced) at current basic prices

But is this faster growth driven by faster growth in their populations, or faster growth in the workforce, or faster growth in output per person? Sadly, figures for productivity per person only go back to 2002. But it seems that part of the faster growth in GDP in city cores is faster growth in the workforce, and part is faster growth in productivity. Both Sheffield and Derby saw productivity fall relative to their hinterland, while Tyneside, Leeds, Liverpool and Cardiff saw no improvement compared to their surrounding region. But on average city core productivity still grew marginally faster than their hinterlands.

Most cities either grew their productivity faster or their share of the jobs in the area. The most successful cities did both, and only Sheffield lost ground on both fronts.

Inner city vs outer city region, productivity and jobs, 2002 and 2017

Area	Ratio of productivity			Share of jobs		
	2002	2017	Change	2002	2017	Change
Inner London share of London	108%	111%	3%	57%	62%	4%
Edinburgh as a share of East Scotland	106%	113%	7%	36%	36%	0%
Manchester share of Greater Manchester	95%	100%	4%	26%	30%	3%
Nottingham as a share of Nottinghamshire	92%	94%	2%	40%	38%	-2%

Inner city vs outer city region, productivity and jobs, 2002 and 2017 (cont.)

Area	Ratio of productivity			Share of jobs		
	2002	2017	Change	2002	2017	Change
Cardiff & Vale of Glamorgan as a share of East Wales	102%	102%	0%	44%	46%	1%
Belfast as a share of Northern Ireland	n/a	142%	n/a	29%	29%	0%
Liverpool share of Merseyside	96%	96%	0%	36%	39%	3%
Leeds share of West Yorkshire	106%	106%	0%	41%	42%	0%
Bristol as a share of Gloucestershire, Wiltshire and Bath/Bristol area	95%	96%	1%	23%	23%	0%
Swansea as a share of west wales and the valleys	95%	98%	3%	15%	15%	0%
Derby as a share of Derbyshire	111%	105%	-6%	29%	30%	1%
Tyneside as a share of the North East	99%	99%	0%	36%	37%	1%
Birmingham share of West Midlands county	99%	101%	2%	41%	41%	1%
Leicester as a share of Leicestershire	88%	89%	2%	37%	34%	-3%
Glasgow as a share of west central Scotland	97%	98%	1%	55%	55%	0%
Sheffield as a share of South Yorkshire	102%	101%	-1%	47%	46%	-1%
Average change			1%			1%

Source: ONS, sub-regional productivity

However, the picture looks very different if we look at where income is being *consumed* rather than *produced*.

If we look at the data for the same cities but for income (which is based on where people live, not where they work) then we see that nine of the sixteen cores actually had a smaller share of the total income in their area than they did in 1997. On average, the cities did not increase their share of income. So, the greater growth of the city centres is not translating into higher average income. It may be that wealth may be being produced more centrally, but is being consumed elsewhere by commuters. Or it may be that there is different compositional change in the cities: more growth in poorer migrants and students.

Inner city vs outer city region, share of income (GDHI), 1997 and 2017

	1997	2017	Change
Inner London share of London	41%	47%	6%
Edinburgh as a share of East Scotland	30%	30%	0%
Manchester share of Greater Manchester	12%	16%	4%
Nottingham as a share of Nottinghamshire	24%	22%	-1%
Cardiff & Vale of Glamorgan as a share of East Wales	41%	42%	0%
Belfast as a share of Northern Ireland	23%	17%	-5%
Liverpool share of Merseyside	27%	29%	2%
Leeds share of West Yorkshire	36%	36%	0%
Bristol as a share of Gloucestershire, Wiltshire and Bath/Bristol area	16%	17%	0%
Swansea as a share of west wales and the valleys	13%	12%	0%
Derby as a share of Derbyshire	24%	21%	-3%
Tyneside as a share of the North East	32%	31%	0%
Birmingham share of West Midlands county	37%	37%	0%
Leicester as a share of Leicestershire	26%	25%	-1%
Glasgow as a share of west central Scotland	38%	38%	0%
Sheffield as a share of South Yorkshire	42%	41%	-1%
Average change			0%

Source: ONS, Gross Disposable Household Income

If we move on to look at income *per person* rather than total income, then the trends look less favourable again for the central cities. If we express income per head as a percentage of income per head in the wider area, we see that in 11 of the 16 cities, incomes per person grew more slowly than in the wider region as a whole. On average, income per head grew more slowly in the cities than in their hinterlands.

Inner city vs outer city region, ratio of income (GDHI) per head, 1997 and 2017

	1997	2017	Change
Inner London share of London	108%	117%	9%
Edinburgh as a share of East Scotland	120%	115%	-5%
Manchester share of Greater Manchester	75%	83%	8%
Nottingham as a share of Nottinghamshire	88%	78%	-9%
Cardiff & Vale of Glamorgan as a share of East Wales	102%	98%	-4%
Belfast as a share of Northern Ireland	113%	96%	-17%
Liverpool share of Merseyside	91%	91%	0%
Leeds share of West Yorkshire	105%	107%	1%
Bristol as a share of Gloucestershire, Wiltshire and Bath/Bristol area	90%	91%	1%
Swansea as a share of west wales and the valleys	103%	99%	-4%
Derby as a share of Derbyshire	100%	87%	-13%
Tyneside as a share of the North East	99%	98%	-2%
Birmingham share of West Midlands county	96%	95%	-1%
Leicester as a share of Leicestershire	81%	76%	-5%
Glasgow as a share of west central Scotland	96%	93%	-3%
Sheffield as a share of South Yorkshire	104%	99%	-5%
Average change			-3%

Source: ONS, Gross Disposable Household Income

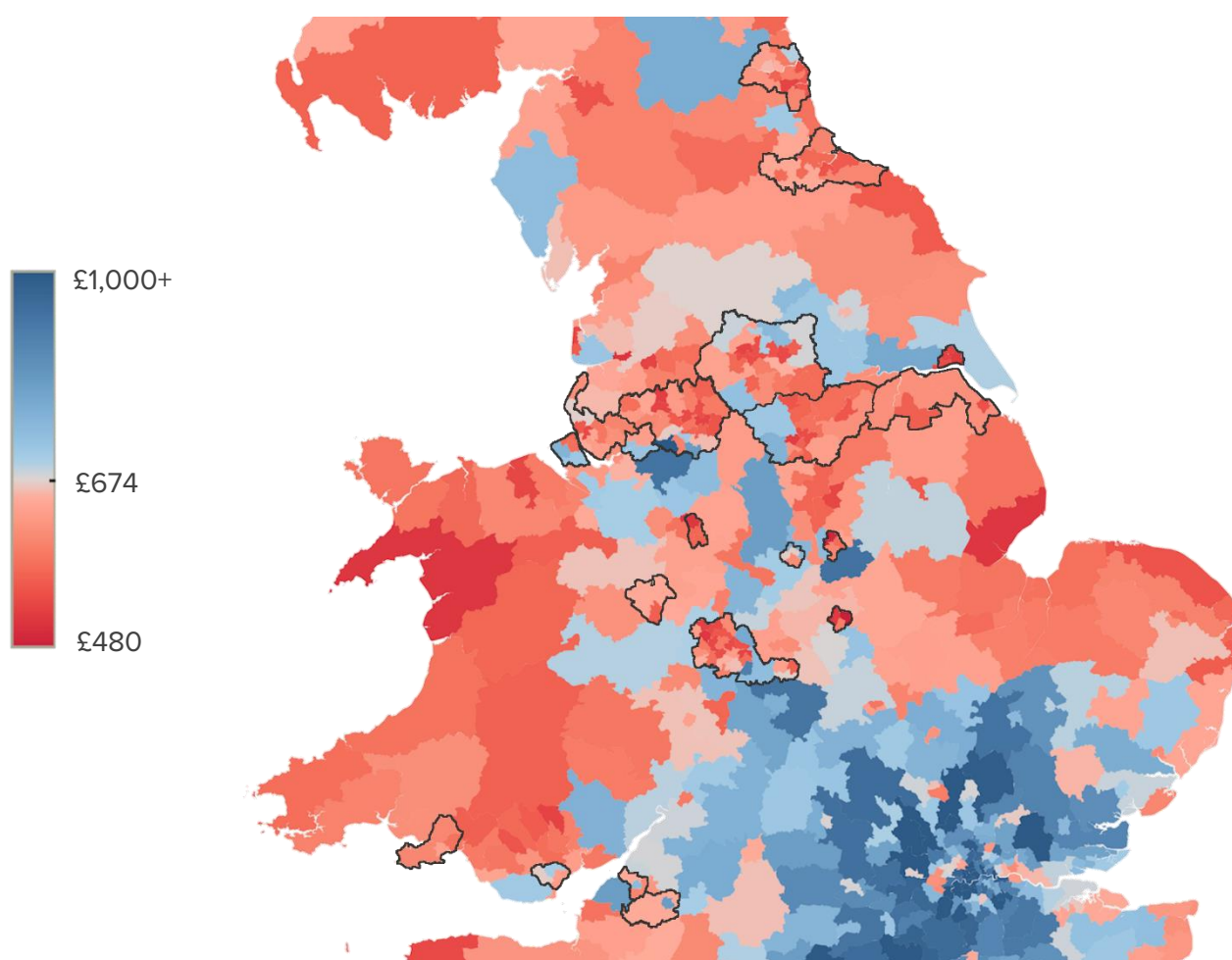
One possibility is that not only was faster GDP growth in the cities supported by growth in commuting, but the in-commuters also saw faster growth in incomes. Or this may be a result of the changing composition of the cities. Greater growth in student numbers, more international migration and other factors may have an effect too.

Finally, we can look at earnings in these cities. Because earnings data can be generated from tax records (unlike income or productivity data above) it allows us to look in more granular detail *within* the cities.

What we see again is that even *within* large cities, higher earnings tend to be seen on the periphery of the city – as well as immediately outside. This is very apparent in West Yorkshire. Within Greater Manchester we see higher earnings in southern suburbs as well as outside in Cheshire. In Sheffield we see affluent western suburbs around Hallam. Merseyside contains more constituencies with higher earnings further out from the centre of the city, particularly on the Wirral. Cities like Leicester, Nottingham, and Hull appear as islands of low earnings surrounded by more prosperous areas. The West Midlands is an exception, with the lowest incomes seen in the black country, rather than Birmingham.

If we were to look at the *growth* in earnings, sadly data is only available back to 2010, and over this short period there is no clear pattern of faster or slower earnings growth within cities, or between cities and the rest.

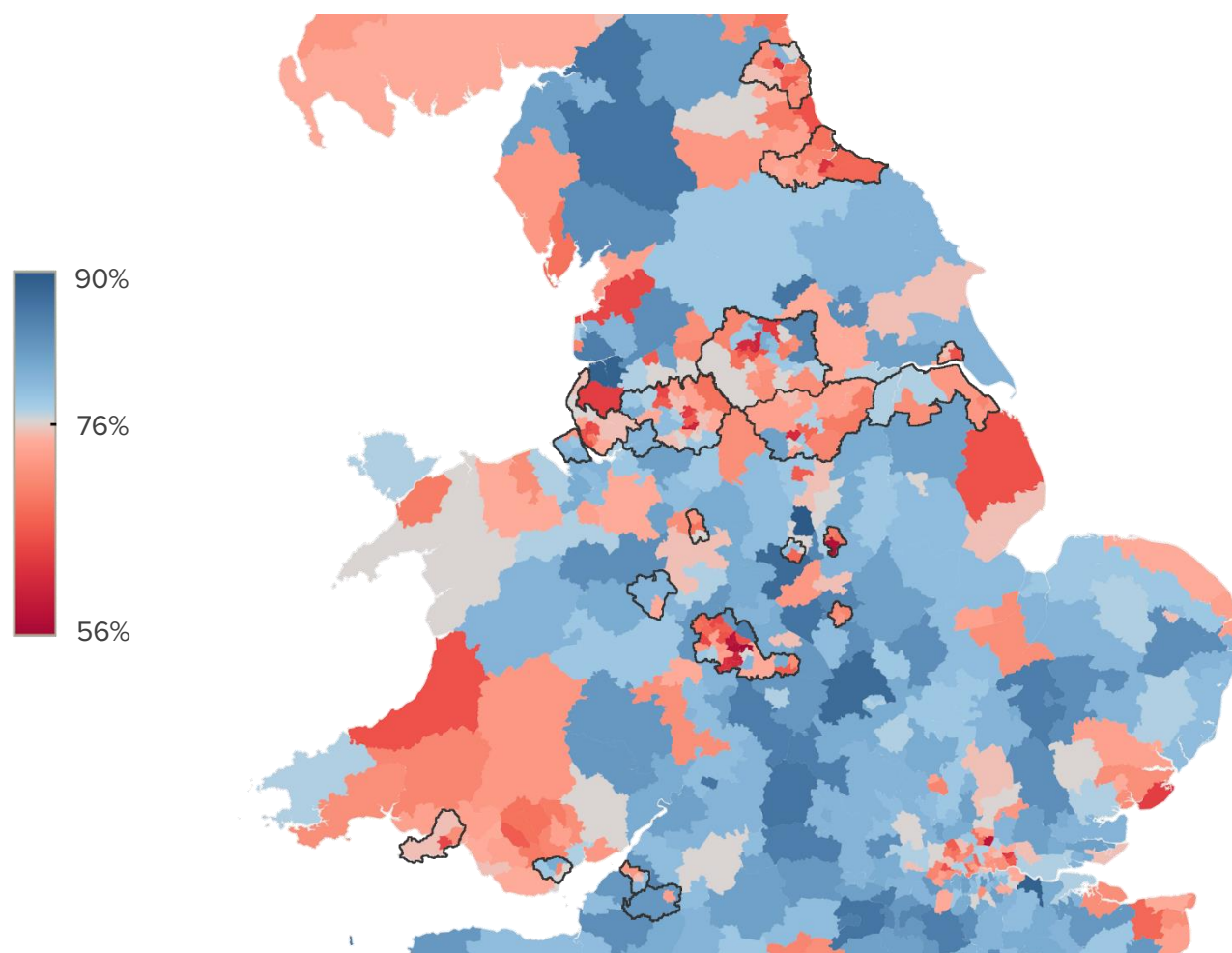
Figure 41: Mean earnings for full time workers, by parliamentary constituency, average of 2017-2019



Source: ONS, Annual Survey of Hours and Earnings by 2010 Parliamentary constituencies

If we look at employment rates for people of working age (16-64) we see a similar pattern, with employment rates in the inner cities generally lower than in the city periphery, and the highest rates in more rural areas outside. If we were to look at 16+ employment rates the pattern would look similar, with the difference that rates would be much higher in London due to a greater proportion of people there carrying on working after age 65.

Figure 42: Employment rate (16-64) in 2019 by parliamentary constituency



Source: ONS, Annual Population Survey / LFS

So, to summarise:

- Cities grew GDP faster than their surrounding areas.
- This was partly because they had marginally stronger productivity growth, but also because they grew employment faster – whether it was more people living within the cities or more commuters.
- Yet cities didn't grow their share of the income in the area on average, suggesting that the growth in output from their commuter workforce grew faster than resident workers.

- On average, cities saw slower growth in income per head than their surrounding areas, suggesting that as well as accounting for more of city-based production overall, the average commuter from outside was also more likely to grow their individual output faster than city centre residents. That may reflect a different composition to the population in the cities compared to the surroundings (e.g. more students, more migrants, more people not of working age), and/or faster growth in commuter incomes.
- We generally see lower earnings and lower employment in the centres of large cities compared to the outer parts.
- All this argues against a simplistic division of policy into cities vs surrounding towns. The city core economies have grown output faster than their surroundings over recent decades. But the benefits of growth were more likely to be felt in the periphery of the city and in surrounding areas.
- We may not be able to say that cities have benefitted their surroundings via higher incomes for commuters (the differences between the two may just be compositional) it is at the very least not obvious that cities have gained at the expense of people in their hinterlands.

None of this tells us anything about whether an area is underperforming its potential. To do a really deep analysis of which areas are underperforming or overperforming is beyond the scope of this paper and deserves a report in its own right.

But, if we apply some basic controls, we can see that differences in qualifications or industrial structure aren't the only things driving differences in incomes. If we look at how earnings by local authority vary from the national average with no controls we see the south east and London have higher earnings. If we control for qualifications and industrial structure (both things which can change in the longer term obviously) we see that differences are smaller. While the south east still does well London does less so. Peripheral areas still underperform (like the south west, Shropshire and Herefordshire, Northumberland, Lincolnshire and North Norfolk, the Scottish Borders). Northern urban areas like South Yorkshire, West Yorkshire and Greater Manchester still underperform, though the urban West Midlands less so.

Figure 43: Earnings compared to UK average, no controls

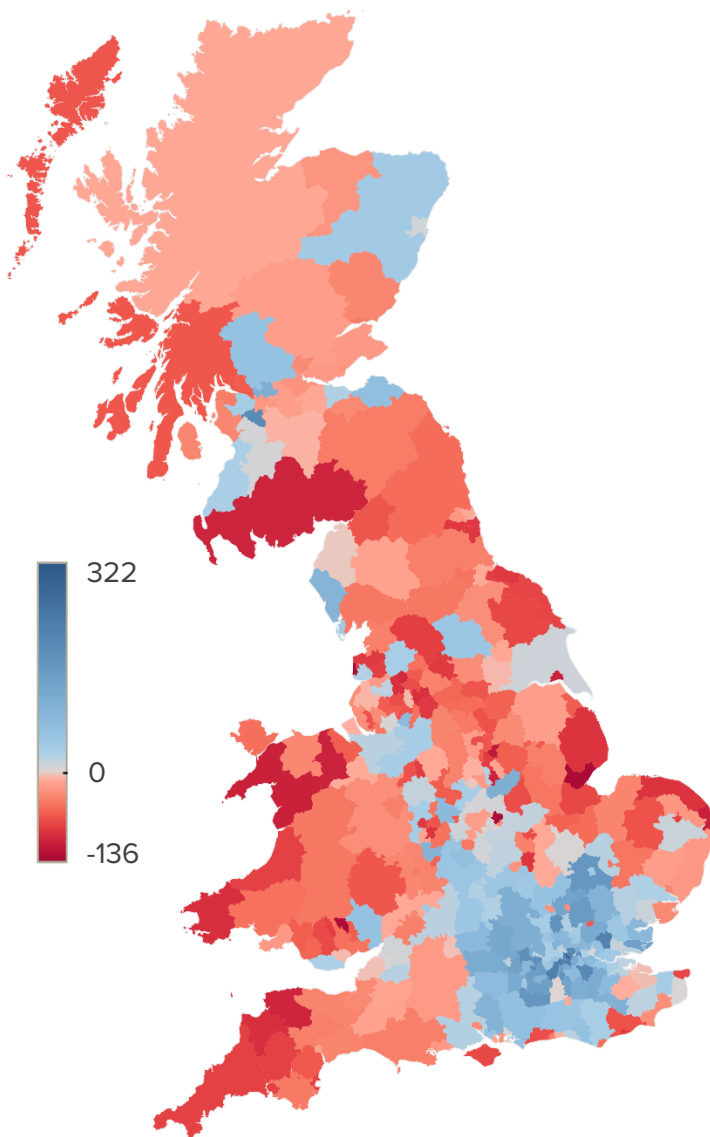
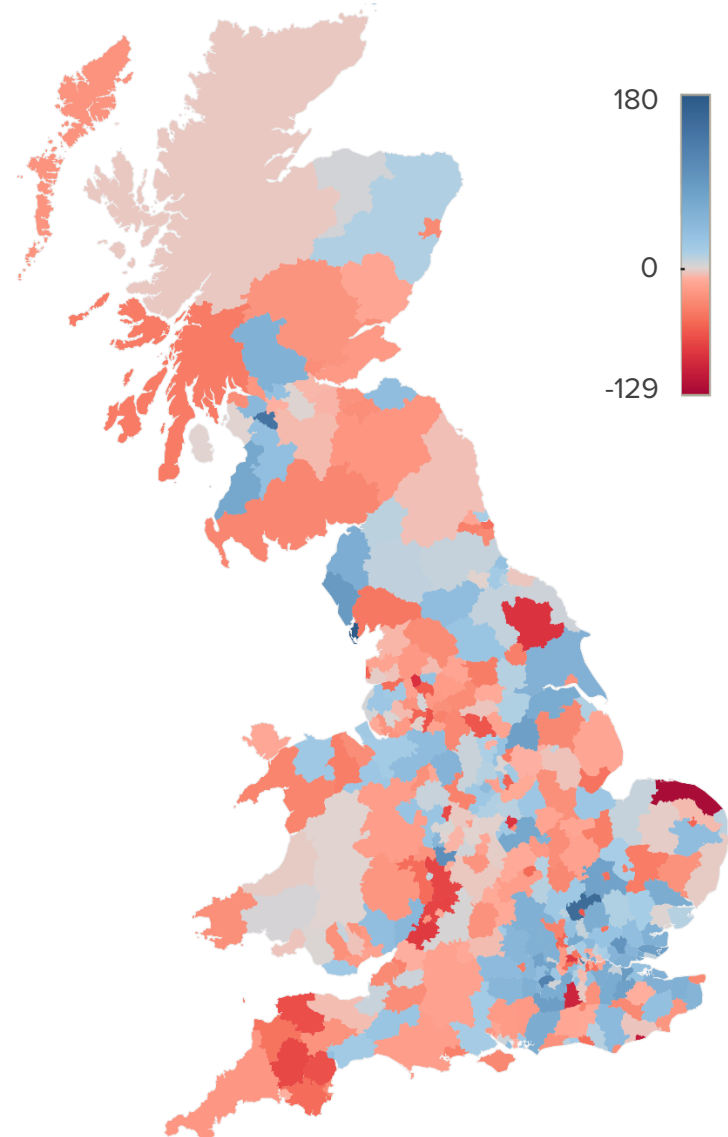


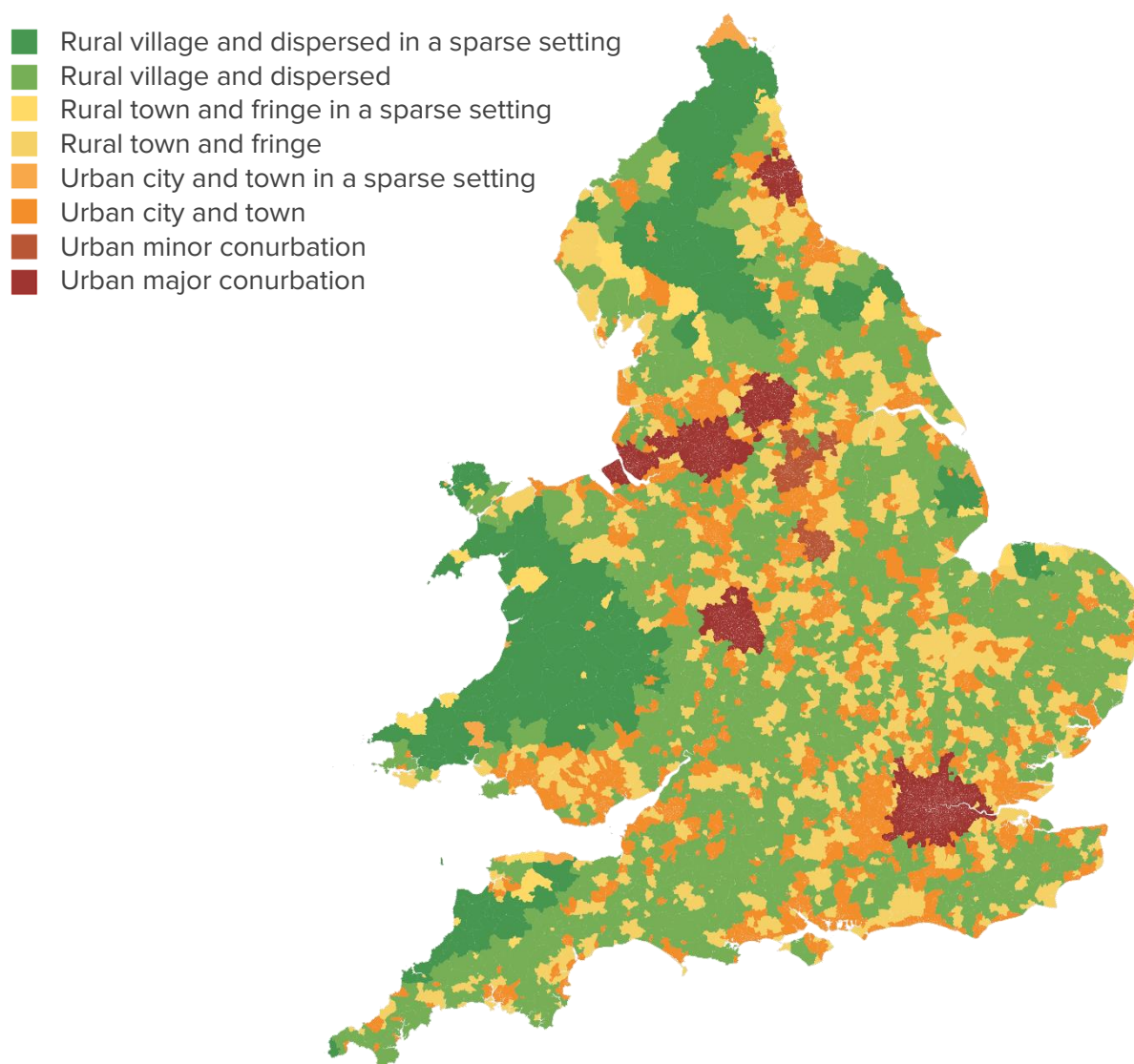
Figure 44: Earnings compared to UK average, with controls



Of course, local authorities and NUTS3 regions can have many different types of urban or rural areas within them and this kind of analysis at the local authority level is not really detailed enough.

We can take a more fine-grained look at the question of cities, towns and rural areas using the ONS data on incomes by so-called Middle layer Super Output Areas (MSOAs) in England and Wales. These are areas with 5,000 to 15,000 people in them, derived from the census and there are around 7,200 such areas in England and Wales. ONS has published model-based income data for each of them every two years. ONS also provides a classification of each MSOA into a number of different rural and urban types, which allows a more granular view of the different sorts of places in the country.

Figure 45: Rurality by MSOA, England and Wales



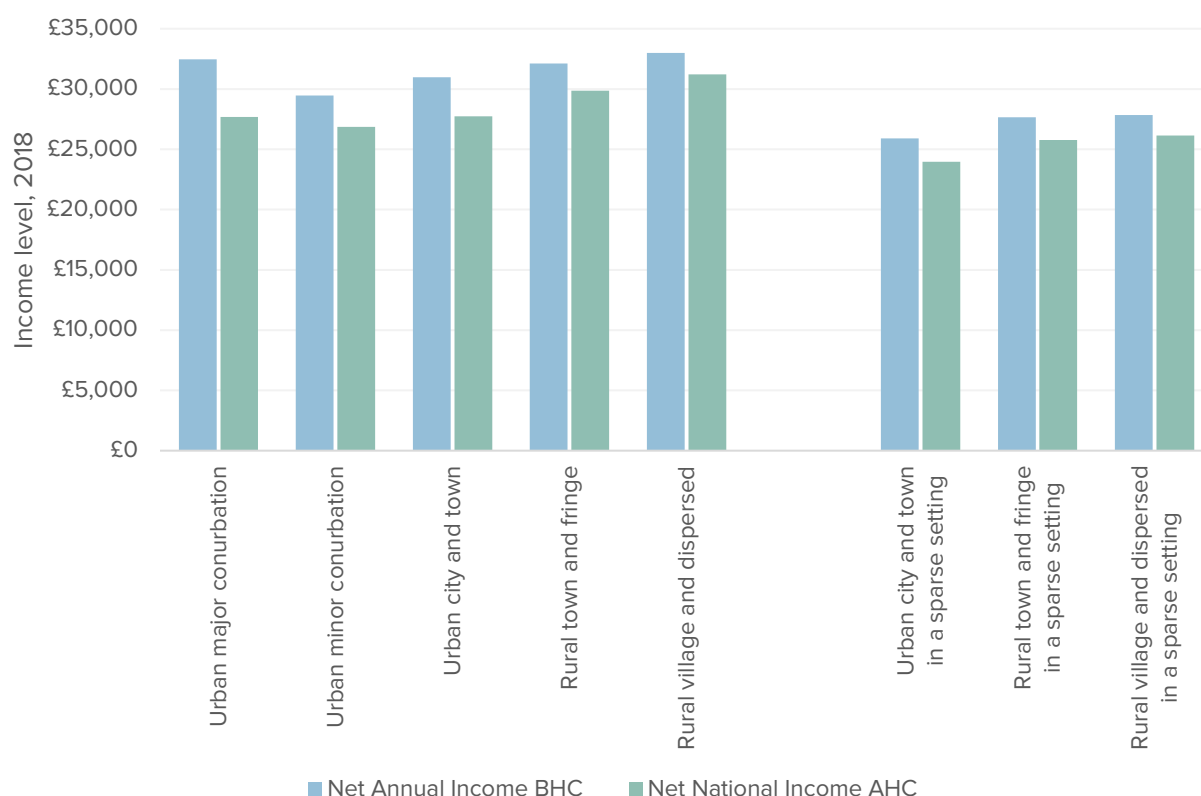
Source: ONS Rural Urban Classification (2011) of Middle Layer Super Output Areas in England and Wales

If we look at income levels in each of these types of areas, we can see that before housing costs incomes have a u-shaped distribution: people in the largest cities have high incomes, people in smaller cities and towns have lower incomes, while people in villages and rural areas have high incomes.

But housing costs are so much larger in large cities that that incomes after housing costs are highest in areas defined by ONS as villages, middling in small towns and lower in cities (particularly smaller cities). People in large conurbations have incomes 2% lower than those in villages before housing costs but 13% lower after housing costs. Neither is necessarily the only “right” measure.

For areas defined by ONS as “sparse”, income levels are 17-18% lower, regardless of whether people live in a town or village, suggesting that for these areas connectivity is holding down incomes. These areas include the north of Devon and Cornwall, most of central Wales, Shropshire and Herefordshire, most of Cumbria and the rural north east, along with large parts of North Yorkshire, Lincolnshire and north Norfolk.

Figure 46: Income levels before and after housing costs, by rurality, 2018



Source: Income estimates for small areas, England and Wales, year ending 2018 and Rural Urban Classification (2011) of Middle Layer Super Output Areas in England and Wales

Data for these small areas is only available since 2012, so it is too soon to reach any firm conclusions about trends in the growth of incomes in different typologies. However, over that short period while there was little convergence or divergence for MSOAs *as a whole*, there seemed to be some convergence of typologies, with growth faster in sparse areas than non-sparse, and higher in minor conurbations and city and town settings than in either major conurbations or rural villages.

Controlling for qualifications, age and sex, suggests that most of these differences in income levels for major conurbations, “city and town” and “rural town and fringe” settings disappear once we apply controls. However, minor conurbations (a relatively small typology) have a strongly positive residual, and rural villages have a small negative impact.

The clearest impact is for sparse typologies, where even after applying these controls we still see substantially lower incomes either before or after housing costs of between £600-£1,300 a year, suggesting that they are in some sense underperforming their potential.

Chapter Four

Which parts of the UK are struggling most and need levelling up?



Different places look like they are struggling, depending on whether we look at levels of income or productivity or earnings, and different again if we look at *growth* in incomes, productivity and earnings. Different metrics give a different impression of which sorts of places are doing less well. First, here are the fifth of NUTS 3 areas with the lowest *level* of income per head (GDHI) in 2018 (where 100 is the UK average) and on the right, the places with slowest *growth* in income since the data began in 1997 (e.g. a change from 120 to 100% of the UK average would be -20).

Ranked by lowest income in 2018

Ranked by slowest growth in income since 1997

Region name	2018	Change	Region name	Change	2018
Nottingham	62.2	-14.8	West Sussex (North East)	-20.2	117.5
Leicester	62.9	-14.7	West Kent	-15.3	131
Blackburn with Darwen	65.1	-13.3	Nottingham	-14.8	62.2
Hull	66.5	-2.3	Leicester	-14.7	62.9
Sandwell	68.3	-7.8	Greater Manchester N. West	-13.8	78.5
Manchester	70.4	4.1	Bradford	-13.7	72.6
Birmingham	72.4	-9.4	Blackburn with Darwen	-13.3	65.1
Bradford	72.6	-13.7	Swansea	-13.3	74.6
Coventry	72.7	-11.0	Sefton	-13.2	92.6
Derry City and Strabane	72.7	7.6	Telford and Wrekin	-13.1	80.7
Stoke-on-Trent	73.4	-3.4	Blackpool	-12.9	75.7
Wolverhampton	73.8	-9.1	Conwy and Denbighshire	-12.9	83.2
Gwent Valleys	73.8	-8.3	Belfast	-12.4	79.1
Walsall	73.9	-8.5	Mid Kent	-12.3	105.2
Swansea	74.6	-13.3	Bridgend and Neath Port Talbot	-11.9	78.7
South Teesside	74.7	-8.8	Coventry	-11.0	72.7
Central Valleys	74.8	-0.7	Medway	-10.8	89.5
Liverpool	75.1	-3.3	Derby	-10.7	75.6
Derby	75.6	-10.7	Greater Manchester S. West	-10.3	100.4
Blackpool	75.7	-12.9	Sheffield	-9.8	76.6
Sunderland	75.8	-3.4	Swindon	-9.8	93.8
Sheffield	76.6	-9.8	Portsmouth	-9.6	77.2
East Lancashire	76.8	0.0	Dudley	-9.5	80
Luton	77.0	-8.8	Birmingham	-9.4	72.4
Gwynedd	77.0	-5.6	Leicestershire CC and Rutland	-9.3	93.6
Portsmouth	77.2	-9.6	Wolverhampton	-9.1	73.8
Greater Manchester North East	77.5	-6.6	Cardiff and Vale of Glamorgan	-9.0	83.8
Newry, Mourne and Down	78.3	0.3	Hounslow and Richmond	-8.9	153

Durham CC	78.4	-7.5	South Teesside	-8.8	74.7
North and North East Lincolnshire	78.4	-7.2	Luton	-8.8	77
Greater Manchester North West	78.5	-13.8	North Hampshire	-8.7	120.2
Fermanagh and Omagh	78.5	7.7	Berkshire	-8.6	118.8
Tyneside	78.7	-11.9	Southampton	-8.6	80.5
Bridgend and Neath Port Talbot	78.7	-7.0	Walsall	-8.5	73.9
Belfast	79.1	-12.4	Norwich and East Norfolk	-8.3	84.8
East Merseyside	79.2	2.6	Gwent Valleys	-8.3	73.8

Source: ONS, Gross Disposable Household Income, NUTS 3 regions

The list above of the places with the lowest *level*/income per head in 2018 include some places which have grown per person incomes faster than the national average, including Manchester, Derry, and East Merseyside, and places that have roughly kept pace, like East Lancashire. Meanwhile, the list of the places which have seen the slowest income *growth* per head includes some places which continue to have above average levels of income per head like West Sussex, West Kent, and so on. If we combine the rank of each place for the *level* of its income and the *growth* of income, we have a list of places that are poor *and* falling further behind, which is where we might think the most serious problems are if we are looking at income.

Region name	1997	2018 ¹	Change
Nottingham	77.0	62.2	-14.8
Leicester	77.6	62.9	-14.7
Blackburn with Darwen	78.4	65.1	-13.3
Bradford	86.3	72.6	-13.7
Swansea	87.9	74.6	-13.3
Coventry	83.7	72.7	-11.0
Birmingham	81.8	72.4	-9.4
Blackpool	88.6	75.7	-12.9
Greater Manchester North West	92.3	78.5	-13.8
Derby	86.3	75.6	-10.7
Wolverhampton	82.9	73.8	-9.1
Sheffield	86.4	76.6	-9.8
Sandwell	76.1	68.3	-7.8
South Teesside	83.5	74.7	-8.8
Walsall	82.4	73.9	-8.5
Portsmouth	86.8	77.2	-9.6
Bridgend and Neath Port Talbot	90.6	78.7	-11.9
Belfast	91.5	79.1	-12.4
Gwent Valleys	82.1	73.8	-8.3

Telford and Wrekin	93.8	80.7	-13.1
Luton	85.8	77.0	-8.8
Dudley	89.5	80.0	-9.5
Conwy and Denbighshire	96.1	83.2	-12.9
North and North East Lincolnshire	85.9	78.4	-7.5
Durham CC	85.6	78.4	-7.2
Greater Manchester North East	84.1	77.5	-6.6
Southampton	89.1	80.5	-8.6
Tyneside	85.7	78.7	-7.0
Gwynedd	82.6	77.0	-5.6
Darlington	89.0	81.2	-7.8
Cardiff and Vale of Glamorgan	92.8	83.8	-9.0
Stoke-on-Trent	76.8	73.4	-3.4
Calderdale and Kirklees	88.1	81.1	-7.0
Kingston upon Hull, City of	68.8	66.5	-2.3
Liverpool	78.4	75.1	-3.3
Norwich and East Norfolk	93.1	84.8	-8.3

Source: ONS, Gross Disposable Household Income, NUTS 3 regions

The places both with low income and low income growth are a mix of types of places including:

Some large cities: Liverpool, Tyneside/Sunderland, Birmingham

Smaller cities: Nottingham, Leicester, Bradford, Swansea, Derby, Sheffield, Luton, Hull, Stoke, Swansea, Portsmouth, Southampton

Peripheral parts of larger conurbations: outer parts of Greater Manchester, the Black Country, (Sandwell, Dudley, Walsall, Wolverhampton), Coventry, Calderdale, Kirklees

Towns outside larger conurbations and post-industrial areas: South Wales and the valleys, County Durham; Blackburn & Darwen, Teesside, Telford & Wrekin; Blackpool

Now, if we repeat the same exercise for *productivity* rather than *income*, we see very different places in the bottom fifth, and if we look at productivity *growth* since data began in 2002, we see a different list again.

Ranked by level			Ranked by change since 2002		
Region name	2018	Change	Region name	2018	Change
Powys	62.1	-5.5	Mid Ulster	87.8	-22.0
Torbay	67.3	-4.9	Tower Hamlets	207.5	-21.0
Southend-on-Sea	68.2	0.2	Derby	88.5	-19.8
Conwy and Denbighshire	69.6	-4.9	Kent Thames Gateway	92.5	-17.1

Herefordshire, County of	70.9	-15.7	Orkney Islands	87.4	-17.0
Isle of Anglesey	71.4	-9.7	Herefordshire, County of	70.9	-15.7
East Sussex CC	72.2	-7.4	Wakefield	80.8	-15.3
Cornwall and Isles of Scilly	72.2	-4.0	York	95.1	-14.3
South Ayrshire	72.3	-0.7	Gwynedd	72.8	-14.1
Walsall	72.6	2.2	Merton, Kingston, Sutton	103.5	-14.0
East Ayrshire and North Ayrshire	72.7	-2.8	Breckland and South Norfolk	79.2	-13.2
South West Wales	72.8	-7.4	Wolverhampton	75.7	-12.7
Gwynedd	72.8	-14.1	Lewisham and Southwark	110.9	-11.9
Isle of Wight	73.1	3.3	East Riding of Yorkshire	83.7	-11.7
Shropshire CC	73.5	-7.1	Buckinghamshire CC	99.0	-11.5
Greater Manchester North East	74.0	-3.6	West Essex	96.7	-10.3
Dumfries and Galloway	75.3	-8.0	Harrow and Hillingdon	124.3	-10.2
Scottish Borders	75.3	4.6	Oxfordshire	92.8	-9.8
Northumberland	75.3	-6.9	Enfield	110.9	-9.8
Derry City and Strabane	75.3	2.5	Isle of Anglesey	71.4	-9.7
North Nottinghamshire	75.5	-9.7	North Nottinghamshire	75.5	-9.7
Blackpool	75.5	-4.8	Lincolnshire	79.3	-9.5
Somerset	75.6	-8.0	Hertfordshire	102.7	-9.1
Wolverhampton	75.7	-12.7	Warrington	94.4	-9.0
North and West Norfolk	76.5	-3.3	East Surrey	127.5	-9.0
Calderdale and Kirklees	77.2	0.0	Essex Thames Gateway	99.0	-8.8
South Teesside	77.3	2.1	Cheshire West and Chester	94.8	-8.6
Sefton	77.5	8.8	Kingston upon Hull, City of	83.4	-8.4
North Yorkshire CC	77.8	-7.3	Dorset CC	84.5	-8.3
Bradford	77.8	-0.5	Flintshire and Wrexham	85.1	-8.3
Fermanagh and Omagh	77.8	-2.3	Bournemouth and Poole	88.4	-8.2
Plymouth	77.9	5.5	Peterborough	90.3	-8.1
Barnsley, Doncaster and Rotherham	78.1	-1.8	Leicestershire CC and Rutland	92.1	-8.1
Stoke-on-Trent	78.2	6.8	Dumfries and Galloway	75.3	-8.0
Devon CC	78.8	-7.5	Somerset	75.6	-8.0
Dudley	78.8	3.0	Barnet	99.6	-7.9
North Northamptonshire	79.0	-5.8	Brent	109.2	-7.8

Source: ONS, Sub-regional productivity, NUTS 3 regions

If we again combine the rankings of each of these areas on their level of productivity and the growth of productivity, we see the places which combine a lower productivity level and lower productivity growth.

Region name	2018	Change
Herefordshire, County of	70.9	-15.7
Gwynedd	72.8	-14.1
Isle of Anglesey	71.4	-9.7
Wolverhampton	75.7	-12.7
North Nottinghamshire	75.5	-9.7
East Sussex CC	72.2	-7.4
Dumfries and Galloway	75.3	-8.0
South West Wales	72.8	-7.4
Breckland and South Norfolk	79.2	-13.2
Wakefield	80.8	-15.3
Somerset	75.6	-8.0
Shropshire CC	73.5	-7.1
Powys	62.1	-5.5
Lincolnshire	79.3	-9.5
Northumberland	75.3	-6.9
Torbay	67.3	-4.9
North Yorkshire CC	77.8	-7.3
Conwy and Denbighshire	69.6	-4.9
Devon CC	78.8	-7.5
East Riding of Yorkshire	83.7	-11.7
Cornwall and Isles of Scilly	72.2	-4.0
Mid Ulster	87.8	-22.0
Orkney Islands	87.4	-17.0
North Northamptonshire	79.0	-5.8
Derby	88.5	-19.8
Blackpool	75.5	-4.8
Kingston upon Hull, City of	83.4	-8.4
Lancaster and Wyre	79.1	-5.4
Tyneside	80.9	-6.5
Greater Manchester North East	74.0	-3.6
Sheffield	80.6	-5.7
East Ayrshire and North Ayrshire	72.7	-2.8
Dorset CC	84.5	-8.3
Staffordshire CC	82.6	-7.0
Flintshire and Wrexham	85.1	-8.3
Kent Thames Gateway	92.5	-17.1
Inverclyde, East Renfrewshire & Renfrewshire	79.3	-4.9

Source: ONS, Sub-regional productivity, NUTS 3 regions

Compared to the list of areas with low income and low income growth, the areas with poor productivity and low productivity growth are much more rural.

There are a few exceptions in smaller cities like Wolverhampton, Wakefield, Hull, Derby, Lancaster and a couple of larger cities in Sheffield and Tyneside. But most of the low productivity / low productivity growth areas are rural.

This poses a crucial question – should policy focus on areas of lower income per person, or lower productivity per person, or both equally, or something else like earnings?

Finally, we turn to earnings data. This allows for more granular analysis because the data comes from administrative tax records with a large sample size (the data is also more timely).

Within Great Britain as a whole, there is a large difference between high earnings in the greater south east and London on the one hand, and low earnings in more peripheral locations like the South West, North Norfolk and Lincolnshire, and Wales.

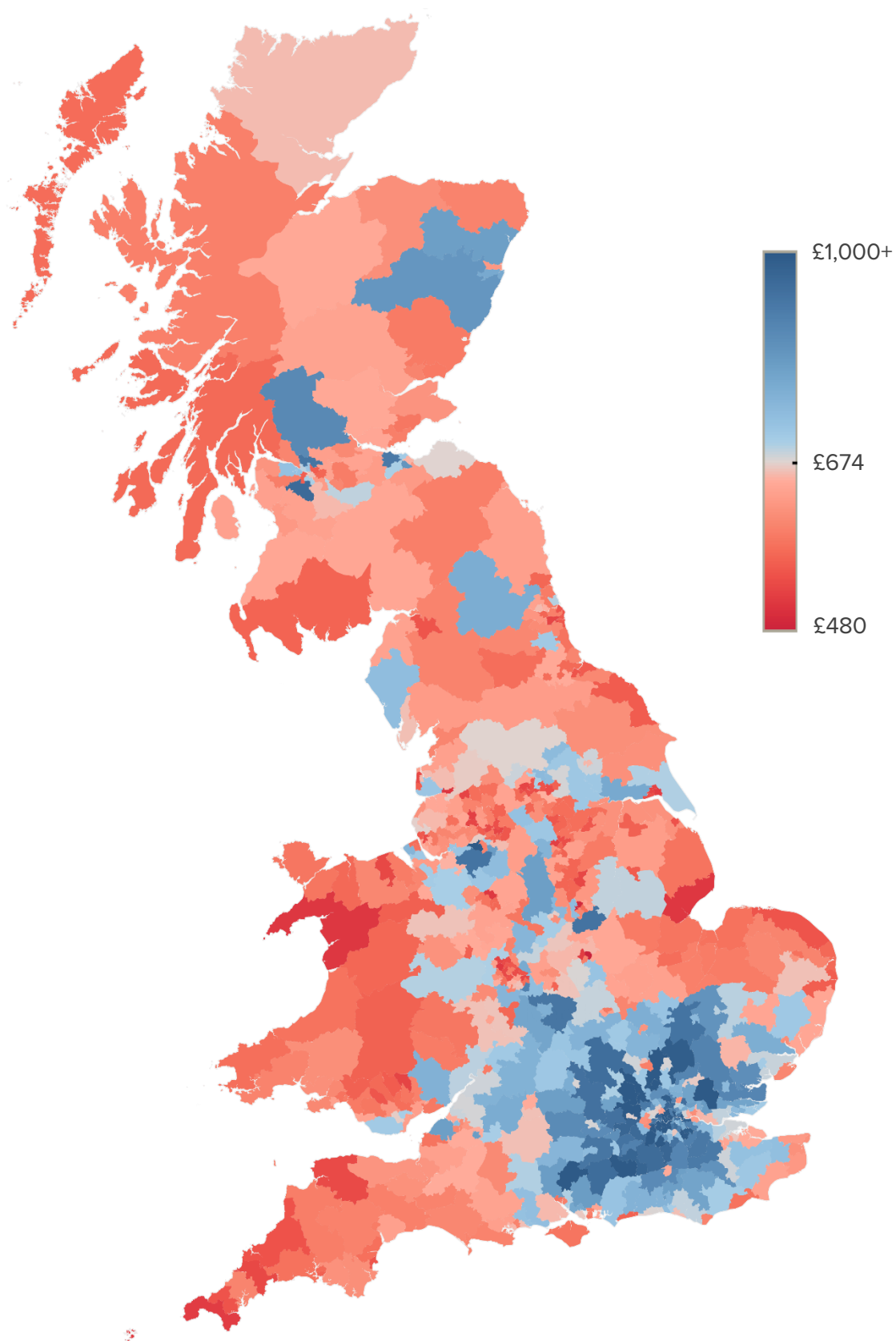
Within Scotland the distinction is between high earnings in Aberdeenshire and the areas around Glasgow and Edinburgh compared to lower earnings in the rest of Scotland, with some very low earnings in central Glasgow.

In Wales Cardiff has relatively higher earnings, with low earnings in the Valleys, Gwynedd and Denbighshire.

Within England, as noted in an earlier section, the cores of large cities outside London *generally* see lower earnings than the periphery and the commuter belts outside, though earnings are also low in in less urban former industrial areas, including Lancashire, the north of Derbyshire and Nottinghamshire, and much of the north east.

Earnings tell us a similar story to productivity and income data, but potentially show more of the detail because the data is more granular.

Figure 47: Mean weekly full-time earnings by parliamentary constituency, average of 2017-2019



If we look at the bottom fifth of NUTS 3 regions (as for income and productivity above), the places with low median earnings (including all workers) are very similar to the areas with low income and low productivity. Data at this level is not currently available on a consistent basis back for many years so the change is not shown here. There are a mix of urban and rural areas in the bottom fifth. Though there are also some smaller city centres in the lists, many low-earnings areas are in peripheral or remote areas or are poorly connected.

Earnings, all workers, 2018 (UK = 100)

Residence		Workplace	
Blackpool	63	Torbay	67
Torbay	77	Blackpool	77
Leicester	77	Southend-on-Sea	78
Lochaber, Skye, Argyll & Bute	78	Sefton	79
Gwynedd	75	Northumberland	79
Cornwall and Isles of Scilly	78	Herefordshire, County of	79
Conwy and Denbighshire	73	Cornwall and Isles of Scilly	79
Kingston upon Hull, City of	75	Isle of Anglesey	80
Herefordshire, County of	76	Gwynedd	81
Blackburn with Darwen	77	Conwy and Denbighshire	81
Nottingham	74	Lochaber, Skye, Argyll & Bute	81
South Teesside	80	Wirral	83
Devon CC	83	Lancaster and Wyre	83
Dumfries & Galloway	83	East Kent	83
Norwich and East Norfolk	79	East Derbyshire	84
North and West Norfolk	85	Dorset CC	84
East Derbyshire	81	Somerset	84
South West Wales	92	Blackburn with Darwen	84
Somerset	81	York	84
North Nottinghamshire	82	Calderdale and Kirklees	84
Isle of Wight	81	Isle of Wight	84
Lincolnshire	81	East Sussex CC	85
York	80	Greater Manchester North West	85
Lancaster and Wyre	81	Leicester	86
Stoke-on-Trent	83	Lincolnshire	86

Barnsley, Doncaster and Rotherham	82	South West Wales	86
Sunderland	84	Dumfries & Galloway	86
Na h-Eileanan Siar (Western Isles)	84	North Nottinghamshire	86
Dorset CC	81	Devon CC	86
Central Valleys	79	Scottish Borders	86
East Lancashire	85	Central Valleys	86
Wolverhampton	83	South and West Derbyshire	86
North and North East Lincolnshire	83	West Sussex (South West)	87
Walsall	85	Norwich and East Norfolk	87
Bradford	82	Greater Manchester North East	87
Darlington	84	South Teesside	87
East Cumbria	85	North and North East Lincolnshire	87

Source: ONS, Annual Survey of Hours and Earnings, NUTS 3 regions, 2018

Finally, we can look at the areas which saw the biggest improvements in income, to identify which areas we might learn lessons from in future research.

As noted above, Greater London as a whole performed strongly over the period for which modern data exists (1997-2018), with the whole region moving from 22% to 39% percent above the UK average income per person, and 27 out of 33 local authorities improving their position.

Scotland improved from 9% below to 7% below the national average income per head, and 24 out of 32 local authorities saw income growing relative to the national average.

Northern Ireland also improved income per head from 19 to 18% below the national average, with nine out of eleven local authorities seeing income per head growing relative to the national average.

The East of England roughly kept pace with the national average, while all the other large regions fell further back by 4-6% of the average national income per head. But within each of these regions there were places that did better.

If we look at England and Wales outside London, we see that the list of the fastest growing places overall (places which grew total income 20% faster than the UK as a whole) features several new towns, like Corby, Milton Keynes, and Stevenage. Most of the areas in the list are commutable from London, apart from the centre of Manchester. Different bits of Cambridgeshire have grown very strongly. Most but not all of these areas also saw income *per head* growing faster than the national average.

Area	Growth 97-18	1997 level per head	2018 level per head	Change in level per head
UK	123%	100	100	0
East Cambridgeshire	153%	111	110	-0.8
Ipswich	157%	83	91	7.7
Stevenage	157%	84	97	13.5
Cambridge	159%	101	115	14.0
South Derbyshire	159%	93	92	-1.2
Fenland	160%	82	86	4.2
Watford	161%	104	114	9.5
Milton Keynes	162%	103	103	-0.2
Canterbury	165%	87	95	8.1
Corby	167%	86	87	1.7
Manchester	172%	66	70	4.1

If we look at the fastest growth in income per head, we see a similar list, still dominated by the commuter belt around London, but with parts of Warwickshire and Derbyshire and places like Barrow also figuring.

Area	Growth 97-18	1997 level per head	2018 level per head	Change in level per head
UK	123%	100	100	0
Nuneaton and Bedworth	138%	79	88	9.0
Wycombe	128%	124	133	9.3
Amber Valley	143%	80	89	9.4
St Albans	140%	154	163	9.4
Watford	161%	104	114	9.5
Barrow-in-Furness	106%	73	83	9.7
Hastings	150%	74	84	10.1
Huntingdonshire	148%	95	105	10.2
Chiltern	119%	166	176	10.6
East Hertfordshire	149%	138	149	10.8
Erewash	147%	70	82	12.0
Adur	142%	89	101	12.1
Stevenage	157%	84	97	13.5
Cambridge	159%	101	115	14.0

If we repeat the same exercise, but also exclude the South East and East, we can identify places that have succeeded despite being in slower-growing regions.

The places with the fastest growth in incomes overall (10% faster than the UK) outside the greater south east feature a number of places with more distant London commuting: Rugby, Northampton, Wellingborough, Kettering, and the other southern parts of the midlands which are beyond the London Green Belt and have strong housing growth.

New Towns like Redditch and Corby feature, as well as smaller cities like Exeter and Gloucester which have expanded. About half of these places improved their income per head compared to the national average, and half didn't.

Area	Growth 97-18	1997 level per head	2018 level per head	Change in level per head
UK	123%	100	100	0
Selby	133%	103.5	102.5	-1.0
Redditch	134%	86.5	94.7	8.2
Daventry	135%	115.8	110	-5.8
Boston	135%	84.5	79.7	-4.8
Exeter	135%	87.3	87	-0.3
Gloucester	135%	90	89.9	-0.1
Nuneaton and Bedworth	138%	79	88	9.0
East Northamptonshire	138%	113.4	104.3	-9.1
Wellingborough	140%	83.2	89.7	6.5
Kettering	141%	95.2	92.3	-2.9
Amber Valley	143%	79.5	88.9	9.4
Northampton	145%	87.2	94.2	7.0
Erewash	147%	70	82	12.0
Rugby	148%	106.9	108.2	1.3
South Derbyshire	159%	93.2	92	-1.2
Corby	167%	85.5	87.2	1.7
Manchester	172%	66.3	70.4	4.1

Finally, if we look at places with the strongest income *per head* growth outside the greater south east, we see a list of highly diverse types of places: Manchester is the regenerating core of a large conurbation, Carlisle is an isolated smaller city, and Amber Valley and Erewash are in rural Derbyshire. They have very different specialisms too: advanced manufacturing in places like Barrow-in-Furness, energy in Copeland, science and technology in Cheshire. It is beyond the scope of this paper to go into the detail of what lies behind these stronger performances, but it's clear that there are multiple routes to success.

Area	Growth 97-18	1997 level per head	2018 level per head	Change in level per head
UK	123%	100	100	0
Cheshire East	120%	112.2	116.2	4.0
Manchester	172%	66.3	70.4	4.1
Tamworth	117%	83.1	88.0	4.9
Scarborough	110%	83.4	88.6	5.2
Burnley	105%	68.8	74.2	5.4
Copeland	104%	83.4	89.7	6.3
Carlisle	124%	82.6	89.0	6.4
Wellingborough	140%	83.2	89.7	6.5
Knowsley	109%	70.4	77.0	6.6
Northampton	145%	87.2	94.2	7.0
High Peak	124%	84.7	92.0	7.3
Redditch	134%	86.5	94.7	8.2
North Warwickshire	127%	85.2	93.8	8.6
Nuneaton and Bedworth	138%	79.0	88.0	9.0
Amber Valley	143%	79.5	88.9	9.4
Barrow-in-Furness	106%	73.1	82.8	9.7
Erewash	147%	70.0	82.0	12.0

Chapter Five

What is the relationship between the economy and people's wellbeing?



Would stronger economic growth actually make people happy? Over the last decade the Office for National Statistics has collected increasingly detailed measures of people's subjective sense of wellbeing. Questions about people's wellbeing have been added to a number of the flagship social surveys, enabling us to start to examine the links between people's sense of wellbeing and other factors.

In particular, ONS surveys now regularly ask four questions, asking people to rate from 1 to 10 their sense that their life is worthwhile, that they are satisfied with life, how happy and how anxious they feel.

If we look at people's reported wellbeing across the country, it has little relationship with most conventional measures of the strength of the local economy. The map below averages together the four measures ONS use, and to deal with small sample sizes also averages over the period 2011/12 to 2019/20. The highest levels of wellbeing are found in rural areas like the highlands, in national parks and Northern Ireland. The lowest are in urban areas, particularly in London, and areas affected by deindustrialisation.

However, analysis also shows us that wellbeing is strongly affected by other factors. It is lowest in middle age and highest in old age. It is lower for people who are single, widowed or divorced. It is lower for people on lower incomes and much lower for those unemployed or long-term sick.

This raises a question: how much of the variation above is simply compositional and how much is an effect of the place itself? At present we don't really know, and there is a fundamentally difficult question about which factors to control for.

London has many more people in the age range where people are least happy. It feels fair to control for this to make a comparison. Moving to London doesn't change your age.

But if a person moves to London, they may have a good chance of a higher paid job – though due to the absence of good data on living costs we don't know to what extent their real disposable income is higher. If someone moves to the south east from the north east, they may face a lower chance of being unemployed for longer periods. Should we control for these factors?

Some others are also debatable. Though a married person doesn't change their chances of being widowed in an urban area, cities may act as "marriage markets" and young people may have a better chance of marrying.

These questions could keep researchers busy for years.

Controlling for everything else (which, as noted above, is debatable) being located in different regions still appears to make some differences to wellbeing. While personal factors like being unemployed or divorced matter more, and a person's health most of all, the differences between the place with the highest wellbeing and lowest (Northern Ireland and London) are comparable to the difference between being a fulltime employee and retired, or between

being an owner occupier and a social tenant. Generally, less urban areas seem to do better. If being in a very large urban area really is bad for wellbeing, that might be a further rationale for action to level up places that have done less well in recent decades.

Figure 48: Wellbeing (4 measures) by local authority

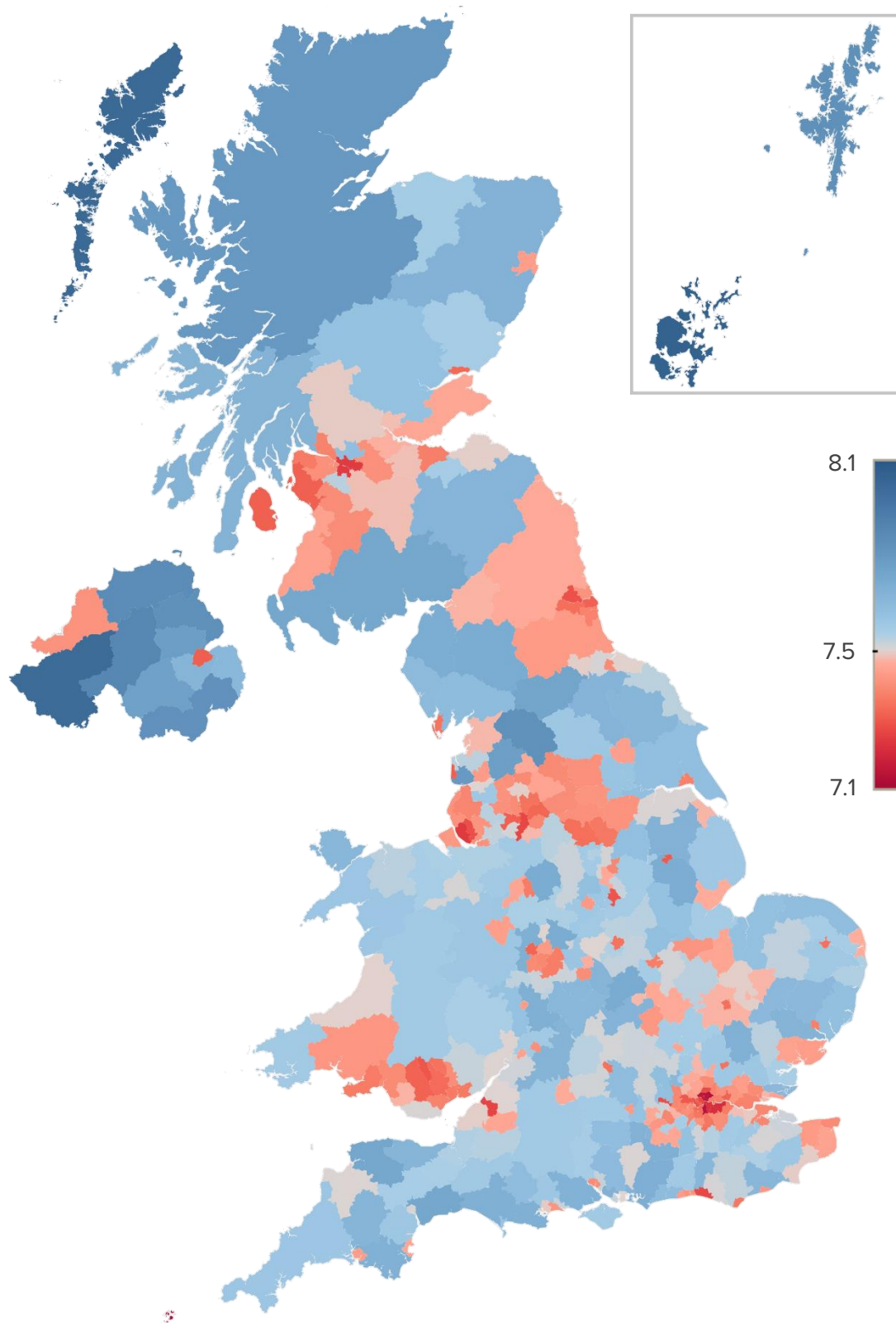
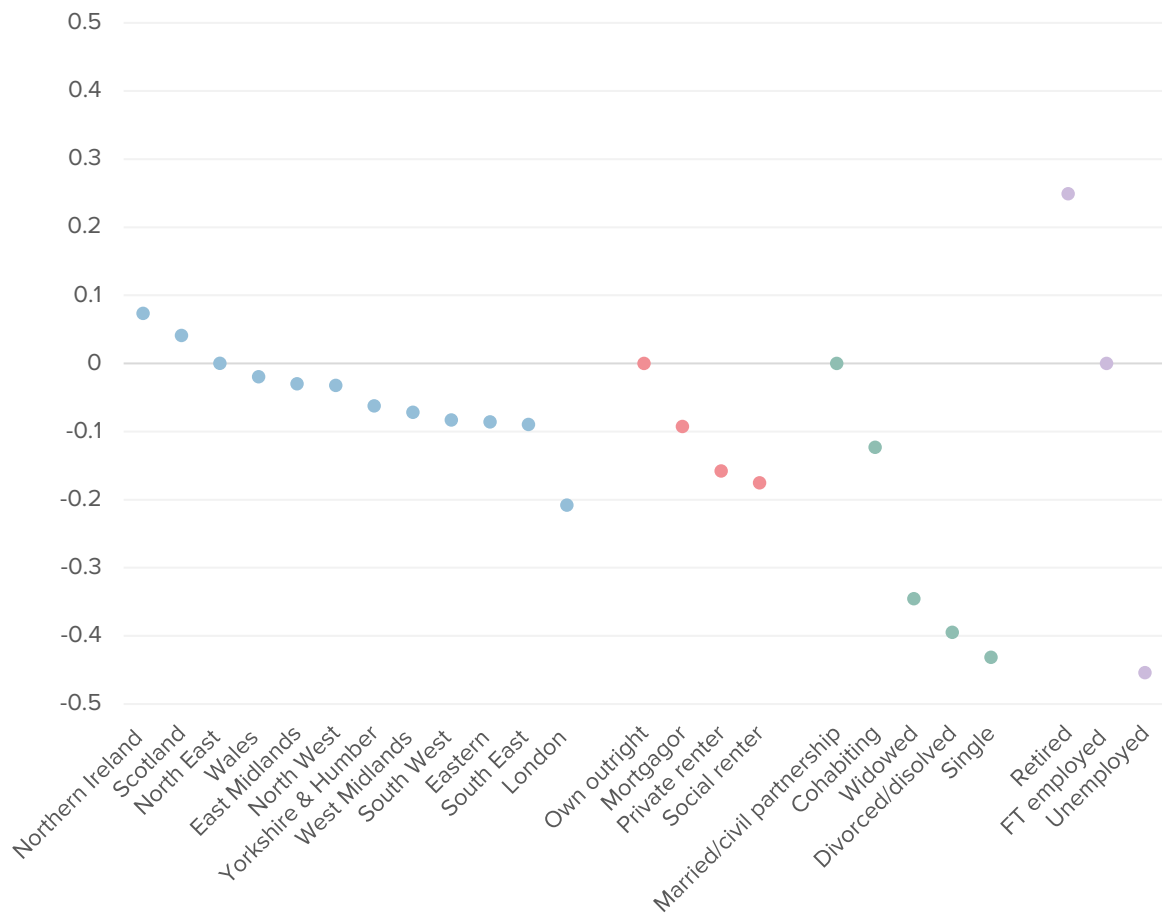


Figure 49: Impact of different regions on measures of wellbeing, controlling for other factors (2014/15 – 2016/17)



(Source: Resolution Foundation, "Happy Now?")

Conclusion

How to measure whether we are ‘Levelling up’



The data in this paper shows that:

- There are really large differences in income, productivity and employment between different parts of the country.
- The differences between different parts of the country have got substantially bigger over time, in two phases which can be characterised as deindustrialisation from the 1970s to the mid-90s, and the pulling away of London since then.
- The differences between different parts of the UK are bigger than most other industrialised countries.
- For some places, different measures can tell quite different stories about exactly where is doing well or badly, particularly regarding cities outside London. On the other hand, in some cases – the relative prosperity of London and the south east, different measures tend to point in the same direction.
- More granular data uncovers substantial variations which simplistic accounts often ignore.

Given the data presented above, the following principles should guide how we measure “levelling up”.

- **We desperately need more local measurements of the cost of living and housing.** It would be much more meaningful if we could easily put data on local incomes onto a real terms-basis. At present all we can do is measure average incomes before and after housing costs, which covers only part of the variation in living costs, and also has other limits as a measure.
- **Government should conduct more detailed analysis of which places are underperforming their potential.** This paper suggests peripheral/remote areas almost certainly are, but more detailed analysis is needed, which may require production of data which isn’t currently available.
- **Government should produce geographical analysis of all budgets and fiscal events, setting out the different impact that tax and spending changes will have on different areas.** The Treasury’s Labour Markets and Distributional Analysis unit should have geographical analysis added to its remit.
- **Given large differences even within conurbations, ideally measures of levelling up should be available and reliable for smaller areas, without being too volatile.**
- **People are more likely to understand and identify with smaller areas like local authorities than with large statistical regions which can also conceal large variations within them.**
- **Given that different indicators tell such different stories, Government should track a number of them.** Different metrics show completely different trends, and none

represents the whole truth. Excessive focus on just one indicator could skew policy. We should be interested in where wealth is produced, not just where it is consumed, but we should be conscious that workplace measures are heavily shaped by commuter flows.

- **If policy had to focus on a couple of measures, earnings and employment rates allow for the most granular analysis for smaller areas, are the most timely, and are also tightly linked to policy.** There is a trade-off between completeness and granularity, and also between completeness and how likely different measures are to be influenced by policy. Productivity data is probably more likely to be more directly influenced by policy actions than measures of income for all people, which is also shaped by the demographics of an area as well as transfers.

Measure	Earnings and (un)employment rates	Productivity	Primary income	Total income
Advantages and disadvantages	Most granular data, most linked to economic policy, shows distributional picture, residence based so more intuitive	Strongly tied to policy with fewer other influences, deeper measure of dynamism than simple earnings	Contains more types of income than earnings, but closer to measuring underlying dynamism of economy than total income	Most complete picture of living conditions, includes post transfer income, and all residents
	Least complete picture of living conditions	Workplace based, less complete than income	Less complete than total income, no transfers	Most other non-policy influences: demographics etc

- **Given ONS research on the powerful impact of unemployment/employment on wellbeing, there is a strong case for measures of employment to be part of any measure of levelling up,** particularly in the period as we come out of the coronavirus crisis. Without employment rates productivity or earning data can mislead, particularly during a recession and its aftermath.
- **In the end, the measures of levelling up government chooses to measure the success or failure of policy should also reflect the rationale for policy.** If the rationale is about increasing opportunity, then non-economy measures like progression to university or economic measures like the unemployment rate are important. If the rationale is mainly about equity, then differences in incomes might be more of a focus. If the rationale is about realising untapped economic potential then productivity and earnings differences could be more of a focus.

- **As previous Onward papers have noted, there is reason to think that there is untapped potential which could be released by a more balanced economy.** Though there is no way to prove causation, it is very striking that there is no industrialised country that has a more unbalanced economy than the UK and a higher income, while all the countries that have a higher income have a more balanced economy. Given this, measures of earnings and productivity might be a priority.
- **Although some of the data in this paper is presented on a relative basis for simplicity, the focus should be on improving the absolute performance of struggling places,** rather than reducing relative differences. The latter runs the risk of performance appearing to improve simply because successful areas stall, and is fundamentally more conservative or liberal.
- **Government should produce a regular annual report which sets out progress across the different dimensions explored in this paper, and should particularly focus on three key tests:**

Are we levelling up? Three key tests

1. Are the bottom fifth and bottom half of local authorities by earnings growing their earnings more quickly than they have in recent years?
2. Are the bottom fifth and bottom half of local authorities with the worst unemployment seeing unemployment rates falling and converging with the national average?
3. Are the bottom fifth and bottom half of local authorities with the lowest employment seeing employment rates rising and converging with the national average?

Annex



Earnings, employment and house prices by constituency, 2019

	Median Earnings (av. 2017-2019)	Median house price	Price-income ratio
Con Hold	£586.49	£282,227	9.06
Con Gain	£529.25	£185,828	6.47
LD	£649.44	£454,171	12.40
Lab	£554.71	£247,688	8.14

	Employment rate - aged 16+	Employment rate - aged 16-64	Unemployment rate - aged 16+	Unemployment rate - aged 16-64
Con Hold	61.7%	79.0%	3.9%	4.0%
Con Gain	57.4%	73.1%	5.3%	5.4%
LD	62.8%	78.4%	3.3%	3.4%
Lab	60.7%	72.1%	5.2%	5.3%

Source: ONS Annual Survey of Hours and Earnings, Annual Population survey and House of Commons Library