

BEYOND THE PANDEMIC

Older industrial Britain in the wake of the crisis

Christina Beatty and Steve Fothergill



BEYOND THE PANDEMIC
Older industrial Britain in the wake of the crisis

Christina Beatty and Steve Fothergill

**Centre for Regional Economic and Social Research
Sheffield Hallam University**

November 2021

*A report commissioned by the Coalfields Regeneration Trust
and the Industrial Communities Alliance*



the coalfields
regeneration trust

The Coalfields Regeneration Trust is the only charitable body and grant-giving organisation dedicated to supporting mining communities across the UK

Coalfields Regeneration Trust, 1 Waterside Park, Valley Way, Wombwell, Barnsley S73 0BB
t: 01226 272800
e: crt.england@coalfields-regen.org.uk
www.coalfields-regen.org.uk



Industrial Communities Alliance

The Industrial Communities Alliance is the all-party association of local authorities in the industrial areas of England, Scotland and Wales

National Secretariat, 1 Regent Street, Barnsley, S Yorkshire S70 2EG
t: 01226 200768
e: natsec@ccc-alliance.org.uk
www.industrialcommunitiesalliance.org.uk

Contents

Summary

1. INTRODUCTION

- Scope of the report
- Older industrial Britain

2. BEFORE THE PANDEMIC

- Employment
- Productivity
- Earnings
- Job growth
- Worklessness and benefits
- Before the pandemic: assessment

3. DURING THE CRISIS

- Public health
- Jobs furloughed
- Unemployment
- In-work benefit claims
- During the crisis: assessment

4. THE POST-PANDEMIC ECONOMY

- Jobs
- Vacancies
- Migrant workers
- Unemployment
- Out-of-work claimants
- Universal Credit

5. IMPLICATIONS FOR LEVELLING UP

- The post-pandemic economy: assessment
- The policies that are needed

Summary

The UK economy experienced a rollercoaster ride during the Covid-19 pandemic. Output fell by more than at any time in the last hundred years and at peak almost a third of all employees were furloughed. Like the rest of the country, older industrial Britain shared this unprecedented turmoil.

Older industrial Britain – a substantial part of the country, home to around a third of the population – lagged behind in terms of prosperity long before the pandemic struck. Employment rates and productivity were below par, earnings were below average, unemployment was higher, the overall numbers on out-of-work benefits much higher, and in older industrial towns and the former coalfields job growth was slower than in London and the cities.

The pandemic then hit hard. Confirmed infection rates were above average in older industrial Britain, especially during the first part of the pandemic, and in older industrial towns and the former coalfields death rates were above average because of an older and less healthy population. Claimant unemployment in older industrial areas surged despite huge numbers on furlough, and the number of in-work benefit claims increased too.

Yet as the UK economy has reopened what is striking is how over the course of the pandemic so little has really changed. In key respects the economy is back to where it started:

- *By the autumn of 2021 the total number of employees in the UK, which fell by a million during 2020, had returned to and even slightly exceeded pre-pandemic levels*
- *There is no evidence that the closure of the Coronavirus Job Retention Scheme, at the end of September 2021, has led to an increase in unemployment*

There is also little evidence that the pandemic has led to significant long-term shifts in the economic geography of the UK:

- *The bounce-back in employee numbers has taken place everywhere. In older industrial Britain the numbers are almost exactly back to where they started.*
- *Although London experienced a bigger-than-average increase in claimant unemployment during the pandemic – to be expected, given the proportion of jobs in hard-hit sectors – its unemployment is now falling faster than elsewhere*

(cont.....)

Nor should it be assumed that the contemporary discussion of labour shortages accurately reflects the situation in older industrial Britain or has overturned long-standing job shortfalls in this part of the country:

- In the autumn of 2021, the ratio between the number of claimant unemployed and the number of recorded vacancies across the UK is only back to pre-pandemic levels*
- Most vacancies are likely to reflect job-to-job moves, as the labour market frees up in the wake of the pandemic, rather than hard-to-fill posts*
- The departure of migrant workers during the pandemic, though hard to quantify reliably, is likely to have impacted far more on London than on older industrial towns and the former coalfields*
- Despite the resurgence in employee numbers, UK claimant unemployment still remains more than 700,000 higher than before the pandemic, though the numbers are now falling*
- In older industrial Britain around 15 per cent of all adults of working age remain out-of-work on benefits*

Although there is clearly a handful of high-profile occupations in which labour shortages are real and disruptive, they should not mislead about the overall state of the labour market, especially in older industrial areas.

The significance of these observations is that older industrial Britain entered the pandemic lagging behind on a wide range of social and economic indicators, was then hit hard during the pandemic and is now emerging still lagging behind. The impact of the pandemic has in no way diminished the case for the Levelling Up to which the UK government is committed and which has always been expected to give priority to the less prosperous places found so widely across older industrial Britain.

The challenge now is to translate the aspiration to deliver Levelling Up into practical reality. The final part of the report sets out the policies that are needed, including new funding and new rules on financial support for businesses, a new emphasis on the manufacturing sector, investment in infrastructure, skills, R&D and the green economy, support for land and property development and devolution to local councils, combined authorities and city regions.

1. INTRODUCTION

Scope of the report

The economic and public health crisis triggered by the emergence of Covid-19 has been the defining event of the last two years. The impacts on the UK as a whole, including a fall in output greater than at any time in a hundred years, are well documented. The impacts on different parts of the country are less well understood but are especially important at a time when the UK government is committed to Levelling Up.

In January 2021 we published a report, *The Impact of the Coronavirus Crisis on Older Industrial Britain*, shedding light on the effect of the crisis up to that point¹. In practice the crisis ran on for much longer than most people expected. Nearly a year later, the virus has not disappeared but the economy has largely re-opened so it is appropriate to look again at the impact on this substantial part of the country.

The present report therefore updates the figures in the earlier report and, importantly, looks at the evidence on the labour market and economy in older industrial areas as the emergency support for businesses and households has been wound down.

SECTION 2 highlights findings from the January report on where older industrial Britain started prior to the crisis in terms of jobs, incomes and unemployment.

SECTION 3 looks at what happened during the crisis, focussing on the public health and labour market impacts in older industrial Britain compared to other parts of the country.

SECTION 4 examines the evidence on the labour market as the economy emerges from the crisis, including job vacancies and the consequences of ending the Coronavirus Job Retention Scheme.

SECTION 5 assesses the implications of the evidence for the UK government's Levelling Up agenda.

¹ C Beatty and S Fothergill (2021) *The Impact of the Coronavirus Crisis on Older Industrial Britain*, CRESR, Sheffield Hallam University.

Older industrial Britain

To bring to bear statistics we need a working definition of 'older industrial Britain'. As in the January 2021 report we use three overlapping definitions:

- **Older industrial towns**
This is a list of 91 local authorities in the Midlands, North, Scotland and Wales where industries such as coal, steel, chemicals, engineering and textiles have shed large numbers of jobs over the years². Some of these towns are actually small cities whilst others are quite small places. The local authorities covering older industrial towns have a combined population of 16.8 million or 26 per cent of the GB total³.
- **Former coalfields**
This is a distinctive part of older industrial Britain. Most of the coalfields are included within the definition of 'older industrial towns' but they also extend into a number of other areas. We mostly use a ward-based definition of the former coalfields⁴, which have a combined population of 5.8 million or 9 per cent of the GB total.
- **Main regional cities**
These are the ten main cities in the Midlands, North, Scotland and Wales⁵. They are all older industrial to some extent but they have always played a wider role as service centres for their hinterlands, administrative headquarters, transport hubs and home to major universities. They were therefore never quite as reliant on the older industries that have now shrunk or disappeared. The main regional cities, defined by their local authorities, have a combined population of 5.7 million or 9 per cent of the GB total.

Because of overlap the population figures here should not be added together. Overall, however, around 23 million people live in one or other of these areas – just over a third of the GB population. For comparison, we also present figures for:

- **London**, (pop. 9 million)
- **South East England** (pop. 9.2 million) defined at here regional level and excluding London, to illustrate what is achievable in a strong regional economy
- **Great Britain** as a whole (or occasionally the UK, which includes Northern Ireland)

² See C Beatty and S Fothergill (2020) 'Recovery or stagnation: Britain's older industrial towns since the recession', *Regional Studies*, vol 54, pp. 1238-1249.

³ Source: ONS mid-year population estimates for 2020.

⁴ See C Beatty, S Fothergill and T Gore (2019) *The State of the Coalfields 2019*, CRESR, Sheffield Hallam University. This also includes of the local authority-based definition used for some data.

⁵ Birmingham, Cardiff, Edinburgh, Glasgow, Leeds, Liverpool, Manchester, Newcastle upon Tyne, Nottingham and Sheffield.

2. BEFORE THE PANDEMIC

Employment

The defining feature of older industrial Britain, distinguishing this part of the country from other places, is the destruction over successive decades of its original economic base. In older industrial Britain, worries about the number of jobs long pre-date the pandemic.

There are a number of ways in which this underlying economic weakness can be measured. One of them is by the ‘employment rate’ – the share of adults of working age in employment. However, to get a reliable picture we have to take students in full-time education out of the picture because they are a large group, mostly outside the labour market, concentrated in the big cities and a number of university towns where they artificially lower the overall employment rate. By comparison, there are few higher educational institutions in most older industrial towns or the former coalfields. The *employment rate excluding economically inactive students*⁶ therefore provides the best guide.

Employment rate (%) of 16-64 year olds, excluding students, 2019

South East England	83.4
GB average	80.3
London	80.1
Older industrial towns	77.5
Former coalfields*	77.5
Main regional cities	77.2

Source: APS

*Local authority-based definition

On this measure, the employment rate in older industrial Britain prior to the pandemic was six percentage points behind the level in South East England and three percentage points behind the GB average. Whilst in percentage terms the gap may seem modest it actually represents a substantial job shortfall. For example, to match the employment rate (excluding students) in South East England:

- In older industrial towns, an extra **580,000** residents of working age would have had to be in work.
- In the former coalfields, an extra **200,000** residents of working age would have had to be in work.

⁶ i.e. students not in employment, including young people at school, college or university.

- In the main regional cities, an extra **210,000** residents of working age would have had to be in work

Even to match the GB average employment rate (excluding students) the increases in employment would have had to be 280,000, 95,000 and 105,000 respectively.

The weakness of the labour market in much of older industrial Britain prior to the pandemic is clearer still in the data on 'job density' – the ratio between the number of jobs located in each area⁷ and the local population of working age:

Number of jobs in area per 100 residents of working age, 2019

London	89
Main regional cities	86
South East England	77
GB average	77
Older industrial towns	66
Former coalfields	57

Sources: BRES, ONS

In 2019, prior to the pandemic, Britain's older industrial towns had just 66 jobs for every 100 adults of working age. In the former coalfields the figure was only 57 per 100. Both figures were well behind the national average.

The gap between the low job density figures in much of older industrial Britain and the rather higher employment rates is explained by commuting: older industrial towns and the former coalfields are integral parts of complex commuting networks, particularly into neighbouring cities. However, it is hard to escape the conclusion that one of the reasons why so many people commute out of older industrial towns and the coalfields is that there have not been enough jobs in the places where they live.

Productivity

Local figures on Gross Value Added (GVA) – the output of the local economy – are influenced by commuting patterns because production is recorded where people work, not where they live. Unsurprisingly, therefore, prior to the pandemic GVA per head in Britain's older industrial towns came in at just 70 per cent of the national average and in the former coalfields at just 67 per cent. In the main regional cities the inflow of commuters meant that, at 111 per cent, GVA per head was above the national average though still far short of London's 177 per cent.

⁷ The Business Register and Employment Survey (BRES) data used here includes employees and the self-employed (excepting those not registered for VAT or PAYE).

Productivity (GVA) 2018, UK=100

	Per head	Per job
London	177	141
South East England	107	106
UK average	100	100
Main regional cities	111	92
Older industrial towns	70	84
Former coalfields*	67	84

Source: ONS

*Local authority-based definition

Expressing GVA in relation to the number of jobs in each part of the country changes this picture. On this measure older industrial towns and the former coalfields were not quite so far behind – they both came in at 84 per cent of the national average – and the main regional cities slipped to below average.

Both sets of GVA figures suggest that older industrial Britain has a ‘productivity problem’ but the reality is complex. The local figures reflect the mix of industries, the mix of occupations and the number of hours worked as well as the efficiency of production. In practice, much of older industrial Britain has a mix of industries and occupations skewed towards lower-grade, low value-added work, which lowers figures on GVA per job. The underlying differences in ‘efficiency’ are actually much smaller than the differences in GVA per job⁸

Earnings

Prior to the pandemic, hourly earnings in older industrial towns and the former coalfields were on average eight per cent below the national average and only around three-quarters of the level in London.

Median gross hourly earnings of residents in full-time work, 2019, GB=100

	Men	Women
London	123	125
South East England	112	105
GB average	100	100
Main regional cities	95	96
Older industrial towns	92	92
Former coalfields*	92	91

Source: ASHE

*Local authority-based definition

⁸ See C Beatty and S Fothergill (2019) *Local Productivity: the real differences across UK cities and regions*, CRESR, Sheffield Hallam University.

Job growth

The UK economy enjoyed a period of substantial job growth in the years before the pandemic. This was partly a recovery from the recession triggered by the 2008 financial crisis but job growth was also fuelled by sluggish increases in labour productivity, meaning that higher output led fairly directly to higher employment.

Between 2012 and 2019, employment in older industrial towns and in the former coalfields was growing but more slowly than the national average and much more slowly than in the cities.

	Increase in employee jobs, 2012-2019	
	as % of jobs	as % of pop. aged 16-64
London	16.0	12.3
Main regional cities	10.7	8.3
GB average	10.4	7.2
South East England	9.5	6.7
Older industrial towns	6.9	4.2
Former coalfields	7.5	4.0

Source: BRES

Expressed in relation to the stock of jobs in each area, the job growth between 2012 and 2019 in older industrial towns and in the former coalfields was respectable at around 7 per cent, though far less than in London (16 per cent) or the main regional cities (10 per cent).

Expressed in relation to the resident working age population – a better indicator of the strength of local labour demand – the growth in older industrial towns and the former coalfields was less impressive – only around 4 per cent, or one-third of the equivalent rate in London and half the equivalent rate in the main regional cities.

Worklessness and benefits

Unemployment has long been a significant feature of older industrial Britain, which is hardly surprising given the scale of job loss over the years. Nevertheless, the prolonged period of economic growth prior to the financial crisis and the subsequent sustained if unspectacular recovery did much to lower levels of worklessness.

In February 2020, just prior to the pandemic, claimant unemployment – the number on benefit required to look for work – stood at 1.26 million across Great Britain as a whole. By this point nearly all the claimant unemployed were in receipt of Universal Credit, the roll-out of which had extended the scope of those required to look for work and raised the numbers by around 450,000 from a low-point in 2016/17. A second measure of unemployment in February 2020, from the government's Labour Force Survey, pointed to a not-dissimilar total of 1.3 million.

Claimant unemployment, February 2020
(as % of economically active 16-64 yr. olds)

Main regional cities	5.9
Older industrial towns	5.1
Former coalfields	4.7
London	3.9
GB average	3.9
South East England	2.9

Sources: DWP, APS

Claimant unemployment rates in older industrial Britain were higher than the national average, though at around 5 per cent they were low by historical standards. In Britain's older industrial towns 405,000 people were claimant unemployed, 126,000 in the former coalfields and 166,000 in the main regional cities.

However, the numbers out-of-work on benefits extend much further than just the claimant unemployed. This is particularly the case in older industrial Britain where the effect of job loss has often been to divert large numbers of working-age men and women onto incapacity benefits, in effect hiding unemployment. Across Britain as a whole, the numbers out-of-work on incapacity benefits peaked in the early 2000s at 2.7 million, compared to just 750,000 at the end of the 1970s. Economic recovery and tightening eligibility then reduced the numbers but in February 2020, just prior to the pandemic, the headline GB total still stood at 2.3 million⁹.

Incapacity benefit claimants, February 2020
(as % of working age pop.)

Former coalfields	7.9
Older industrial towns	7.7
Main regional cities	7.1
GB average	5.7
London	4.5
South East England	4.1

Sources: DWP, ONS

Prior to the pandemic the incapacity claimant rate in older industrial Britain remained much higher than the national average and almost double the level in South East England. In older industrial towns 800,000 men and women, representing 7.7 per cent of all adults of working age, were out-of-work on incapacity benefits. In the former coalfields 280,000 men and women of working age were out-of-work on incapacity benefits, an even higher claimant rate of 7.9 per cent.

⁹ Individuals claiming Employment and Support Allowance plus the number of households claiming Universal Credit on the grounds of limited capability to work.

With the biggest job losses from industries such as coal and steel now receding into the past, few incapacity claimants will have been the redundant workers from older industries, who have mostly reached pension age. More often they will be men and women in the following generation who have found it hard to keep a foothold in a difficult labour market.

Prior to the pandemic, the overall numbers out-of-work on benefits¹⁰ therefore remained substantial: 1.27 million in older industrial towns, 430,000 in the former coalfields and 470,000 in the main regional cities, or almost one-in eight of all working age adults. The out-of-work claimant rate in these areas was almost double the level in South East England.

**Overall out-of-work claimant rate, February 2020
(as % of working age pop.)**

Main regional cities	12.3
Older industrial towns	12.2
Former coalfields	12.2
GB average	9.4
London	8.4
South East England	6.8

Sources: DWP, ONS

Before the pandemic: assessment

It is clear is that prior to the pandemic older industrial Britain could not be characterised as economically moribund. In the preceding years there had been job growth and, despite the scale of historic job losses, the unemployment rate was surprisingly modest. But this large part of the country did lag badly behind. In economic and labour market terms it was marked by:

- An employment rate six percentage points below South East England
- A job density in towns and the former coalfields far adrift of the big cities
- Output per job some 15 per cent below the national average
- Below average earnings
- Job growth in towns and the former coalfields at less than half the rate in London
- Above average unemployment
- Especially high numbers on incapacity benefits

What these statistics point to is a part of the country was unquestionably in need of levelling up.

¹⁰ The claimant unemployed, plus incapacity claimants, plus around 190,000 lone parents on Income Support.

3. DURING THE CRISIS

Public health

By late November 2021 there had been a cumulative total of 10 million confirmed Covid-19 infections across the UK¹¹, equivalent to 15 per cent – nearly one-in-six – of the entire population.

The actual number of infections will have been much higher. During the first wave testing was limited mainly to patients in hospital and even as testing took place on a much larger scale, from mid-2020 onwards, tests in a random sample of households¹² indicate that a substantial proportion of infections have continued to go unrecorded. All data on confirmed Covid-19 infections therefore needs to be treated with caution. Additionally, the geography of confirmed infections has shifted from week to week, month to month.

By late November 2021 the cumulative total of confirmed infections stood at 2.8 million in Britain's older industrial towns, 1.2 million in the former coalfields¹³ and 930,000 in the main regional cities.

Confirmed Covid-19 infection rate** over whole pandemic, UK=100 (as at 21 November 2021)

Older industrial towns	112
Main regional cities	110
Former coalfields*	108
UK average	100
London	94
South East England	90

Sources: HM Government, ONS

*Local authority-based definition

** per 100,000 population

In terms of infection rates, these numbers put older industrial Britain 8-12 per cent above the UK average and around 20 per cent higher than in South East England. Our January 2021 report also noted that confirmed infection rates were above average in older industrial Britain

¹¹ Source HM Government

¹²Office for National Statistics (2020 onwards, published weekly) *Coronavirus (Covid-19) Infection Survey*, ONS, London.

¹³ On the local authority-based definition of the coalfields. On the tighter ward-based definition of the coalfields the number would likely be 900-950,000.

but the gap has narrowed over the course of the year as the virus has gradually become endemic and spread on a large scale to all parts of the country.

That older industrial Britain experienced higher infection rates in the early part of the pandemic, especially during the periods spanning national lockdowns, almost certainly owes something to the more limited opportunities for working from home. During the first lockdown for example, infection rates were up to three times higher among those who worked outside the home than among those working some or all the time at home¹⁴. Office staff typically found it easier to work from home than workers in factories, warehouses or on construction sites, and exposure to the virus therefore varied by industry and occupation. This matters because in older industrial Britain there are fewer office jobs and fewer white-collar workers. Our January 2021 report presented estimates of the proportion of the workforce able to work from home: in older industrial towns and in the former coalfields the share was on average 10 percentage points lower than in London and 7 percentage points lower than the average in South East England.

Throughout the pandemic, Covid-related deaths have been better recorded than infections. By late November 2021, across the UK as a whole, there had been more than 140,000 deaths within 28 days of a positive Covid-19 test¹⁵. There had been 44,000 in older industrial towns, 20,000 in the former coalfields¹⁶ and 12,000 in the main regional cities.

Death rate with Covid-19 over whole pandemic, UK=100
(as at 21 November 2021)**

Former coalfields*	123
Older industrial towns	121
Main regional cities	101
UK average	100
South East England	94
London	87

Sources: HM Government, Public Health Wales, ONS

*Local authority-based definition

**Within 28 days of a positive test, per 100,000 population

Our January report noted that up to that point the death rate in older industrial towns and the former coalfields was more than 30 per cent higher than the national average and more than 50 per cent higher than in London and the South East of England. As with confirmed infections, the gaps have narrowed as the year has progressed and the virus has spread more widely. Nevertheless, by late November 2021 the death rate in older industrial towns and in the former coalfields was still around 20 per cent above the national average and around one-third higher than London and the South East.

¹⁴ Office for National Statistics (2020) *Coronavirus (Covid-19) Infection Survey*, 12 June, ONS, London.

¹⁵ Source: HM Government

¹⁶ On the local authority-based definition of the coalfields. On the tighter ward-based definition of the coalfields the number would likely be c.15,000.

It is not difficult to find plausible explanations for the higher death rate in older industrial towns and the former coalfields, and the answers have little to do with differences in the quality of healthcare. One key factor is an older population. Older people have been more likely to fall seriously ill and more likely to die. As we documented in our January report, around 20 per cent the population of industrial towns and the former coalfields are aged over 65, compared to just 14 per cent in the main regional cities and 12 per cent in London.

A second factor is the high proportion of the population with pre-existing health problems. Like age, pre-existing health problems have increased vulnerability to the virus. As we also noted in our January report, more than a third of the adult population of older industrial Britain report health conditions or illnesses lasting more than 12 months. Strikingly too, 8 per cent of the entire population of Britain's older industrial towns and nearer 9 per cent of the population of the former coalfields are disability benefit claimants¹⁷, almost double the proportions in London and the South East.

The main regional cities have a similar confirmed infection rate to older industrial towns and the former coalfields but a notably lower death rate, despite extensive deprivation that is known to be a factor in vulnerability. The key factor here is almost certainly the younger population in the cities.

Jobs furloughed

As the crisis began the UK government introduced the Coronavirus Job Retention Scheme to temporarily pay 80 per cent of the wages, up to a ceiling of £2,500 a month, of employees furloughed as businesses closed down or reduced the scale of their operations. The scheme was subsequently extended until the end of September 2021. In its later stages the scheme required employers to pay National Insurance and pension contributions and support was also available for returning to work on a part-time basis.

The Coronavirus Job Retention Scheme was used extensively. At peak, in early May 2020, 8.9 million workers were furloughed and by the end of June 2020 a cumulative total of 9.6 million jobs had been furloughed at some stage, accounting for 32 per cent of all eligible UK employees¹⁸. Sector by sector, use of the scheme varied enormously reflecting the uneven impact of lockdown on different parts of the economy. In this first part of the crisis up to June 2020:

- 1.7 million employees in accommodation & food services, accounting for 77 per cent of the total, were furloughed on the scheme at some stage
- 470,000 employees in arts, entertainment & recreation, accounting for 70 per cent of the total, were furloughed
- 770,000 employees in construction, accounting for 60 per cent of the total, were furloughed

¹⁷ Disability Living Allowance or its replacement Personal Independence Payment. Source: DWP.

¹⁸ Source: HMRC.

- 1.9 million employees in retailing, wholesaling and the motor trade, accounting for 42 per cent of the total, were furloughed

By way of contrast:

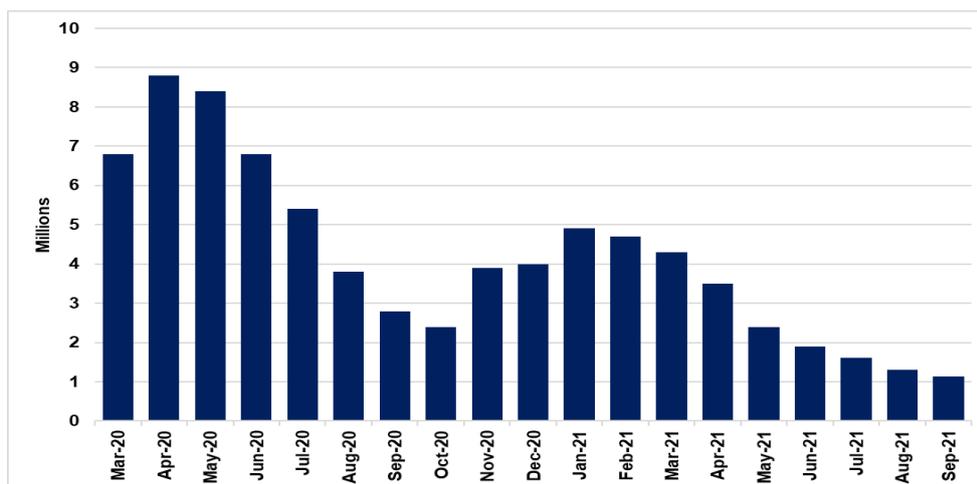
- Just 7 per cent (77,000) of employees in finance and insurance were furloughed
- Just 2 per cent (20,000) of employees in public administration and defence were furloughed

In manufacturing, which remains a large and important sector in much of older industrial Britain, 42 per cent of employees (just over 1 million workers) were furloughed.

In this initial phase of the crisis, use of the Job Retention Scheme was widespread across the country. As we documented in our January 2021 report, in just about all parts of older industrial Britain almost a third of all eligible employees were furloughed at some point, roughly the same proportion as across the UK as a whole. The lowest rates were in a handful of places where a dominant large employer carried on working – 24 per cent in Barrow in Furness (the shipyard), 25 per cent in Copeland (Sellafield nuclear plant) and 27 per cent in Neath Port Talbot (the steelworks) – but these were the exceptions. On the whole, the share of jobs furloughed in older industrial Britain differed little from the national average.

As restrictions eased during the summer of 2020 many employees began to return to work and the numbers supported by the Coronavirus Job Retention Scheme began to decline. The numbers rose again in the autumn and first part of 2021 as restrictions tightened once more and then fell further.

UK employees furloughed on the Coronavirus Job Retention Scheme*



Source: HMRC

*at end of each month

By the end of September 2021, at the point of the scheme’s closure, 1.1 million employees remained on the scheme¹⁹. Of these, 640,000 were fully furloughed, and the remainder back at work but on reduced hours. Reflecting its particular mix of industries and the slow return to city centre offices, in the later months of the scheme London’s furlough rate remained a couple of percentage points higher than in the rest of the country.

Unemployment

Largely because of the Coronavirus Job Retention Scheme, the scale of the increase in unemployment during the pandemic was far less than would normally be expected in response to the scale of the economic downturn. Even so, the increase in recorded unemployment was considerable.

Between February and November 2020, the number of claimant unemployed²⁰ across Great Britain as a whole doubled from 1.26 million to over 2.5 million, an increase in the unemployment rate of 4.2 percentage points²¹. The increase in the UK government’s survey-based measure of unemployment, which only counts active jobseekers available to start work, was much smaller – around 400,000 over the same period – probably because practical constraints during lockdown and the very difficult labour market during the pandemic, when vacancies fell away sharply, deterred some unemployed claimants from even looking for work.

Older industrial Britain was hit hard by the surge in claimant unemployment. Between February and November 2020, the numbers rose by 310,000 in older industrial towns, 100,000 in the former coalfields and 140,000 in the main regional cities.

	Increase in claimant unemployment, Feb-Nov 2020	
	no.	% point increase*
London	310,000	6.5
Main regional cities	140,000	5.1
GB total	1,350,000	4.2
Older industrial towns	310,000	3.9
South East England	170,000	3.8
Former coalfields	100,000	3.6

Sources: DWP, APS

*% of economically active 16-64 year olds

The increase in claimant unemployment was not unique to older industrial Britain. The high proportion of jobs in hard-hit sectors such as hospitality, arts and entertainment contributed to an above-average increase in London and to a lesser extent in the main regional cities.

¹⁹ Provisional HMRC data, likely to be revised upwards a little as late claims come in.

²⁰ Jobseeker’s Allowance claimants plus Universal Credit claimants required to look for work.

²¹ Unemployment rate expressed as a percentage of economically active 16-64 year olds.

Young people were hit especially hard. Recruitment fell away, limiting the openings for those leaving school, college or university. The sectors worst affected by pandemic, such as hospitality and retailing, also traditionally employ large numbers of young people. The effect was to concentrate the labour market shock on young people, the low paid and those on insecure employment contracts²².

Over the year to November 2020 claimant unemployment among 16-24 year olds more than doubled across Britain, from 220,000 to 500,000²³. Added to this, there is substantial unemployment among young people who do not claim benefits, for example because they are supported by parents or a partner or, in the case of 16 and 17 year olds, because they are normally ineligible. Before to the pandemic, the government’s Labour Force Survey recorded almost 250,000 more young unemployed than the claimant count. The Labour Force Survey also recorded a 230,000 increase in the number of ‘economically inactive’ students during the pandemic²⁴, many of whom would normally have undertaken part-time work but found that opportunities had dried up.

In-work benefit claims

A lot of people who remained in work during the pandemic experienced a loss of income, for example because their hours were reduced. For some on low incomes this triggered eligibility for in-work benefits and, where one partner lost their job the other will often have become entitled to in-work benefits. The £20 a week top-up to Universal Credit, introduced as the pandemic kicked in, also brought in an additional cohort of eligible claimants.

Between February and October 2020, the number of in-work UC claimants more than doubled to 620,000 in older industrial towns, 210,000 in the former coalfields, and 210,000 in the main regional cities. By October 2020, some 6 per cent of all adults of working age in older industrial towns and the former coalfields were in-work but receiving Universal Credit as a top-up.

	Universal Credit claimants in employment	
	% point increase Feb-Oct 2020	% of working age pop. Oct 2020
Older industrial towns	3.1	6.0
Former coalfields	3.1	5.9
London	3.3	5.8
Main regional cities	3.0	5.5
GB average	3.0	5.5
South East England	2.8	4.8

Sources: DWP, APS

²² M Brewer, N Cominetti, K Henahan, C McCurdy, R Sehmi and H Slaughter (2020) *Jobs, Jobs. Jobs: evaluating the effects of the current economic crisis on the UK labour market*, Resolution Foundation, London.

²³ Source: DWP

²⁴ Between the annual files for April 2019-March 2020 and July 2020-June 2021.

During the crisis: assessment

The pandemic and its associated economic downturn had a big impact. In older industrial Britain the confirmed infection rate and the death rate have both been above the national average. Older industrial towns and the former coalfields have been hit especially hard because of their older and less healthy population.

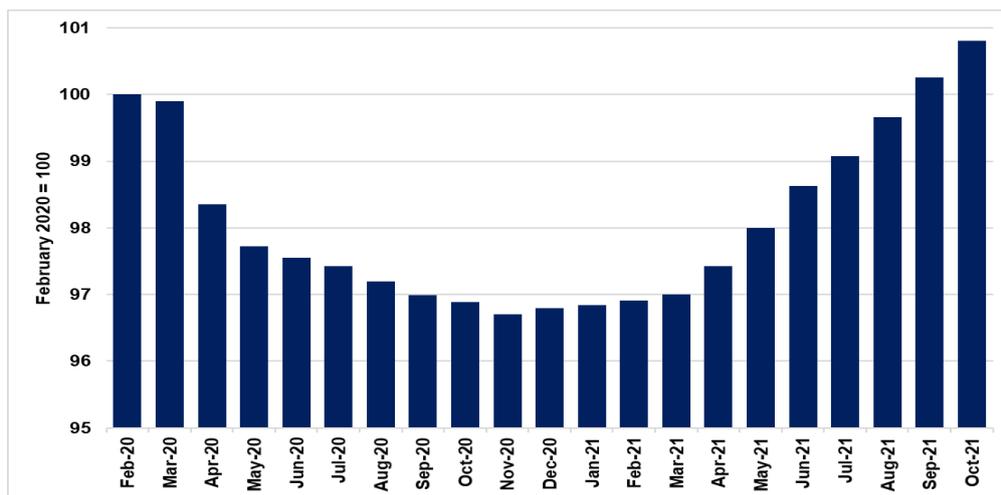
Vast numbers of employees were furloughed in the earlier stages of the pandemic and unemployment surged. So too did the numbers in-work on low incomes receiving benefits. This unprecedented economic disruption was not unique to older industrial Britain but in the short-run at least it effectively overturned a decade of progress in growth and regeneration.

4. THE POST-PANDEMIC ECONOMY

Jobs

During the pandemic the number of employees²⁵ across the UK fell from 29.1 million in February 2020 to a low of 28.1 million in November before recovering to just over 29.3 million in October 2021. Given the severity of the economic downturn, that only one million jobs were lost from peak to trough and that the number of employees now slightly exceeds pre-pandemic levels is remarkable.

Number of employees, UK (Feb 2020=100)



Source: HMRC

Until September 2021 furloughed employees remained within these numbers, which helps explain the shallow reduction during the worst of the downturn. However, the October figures extend beyond the end of the furlough scheme, and beyond the wind-up of nearly all pandemic-related business support.

All UK regions experienced a dip in employment during the pandemic, followed by a recovery to more-or-less previous levels by the late summer of 2021. Older industrial Britain's experience was little different. By August 2021 (the latest date for which local figures were available at the time of writing) the number of employees had returned almost exactly to the levels in February 2020, just before the pandemic.

²⁵ Source: Earnings and Employment PAYE Real Time Information

Number of employees in August 2021 (Feb 2020=100)

Main regional cities	100.9
Older industrial towns	100.1
UK average	100.0
Former coalfields*	99.9
South East England	99.8
London	98.3

Source: PAYE

*Local authority-based definition

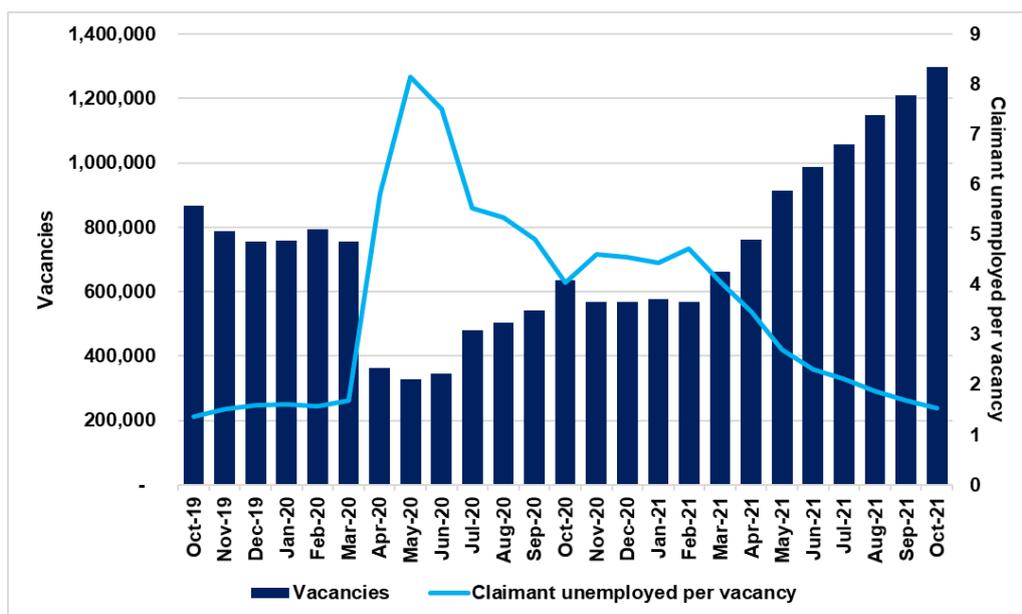
By the autumn of 2021 there was therefore little evidence that the economic downturn had led to lasting damage to UK employment levels. There was also little evidence that the downturn had radically disrupted the pre-pandemic geography of jobs.

Vacancies

As the UK recovered from the economic downturn a dominant topic of discussion became the emergence of labour shortages. A shortage of HGV drivers attracted particular attention but there has also been concern about recruitment difficulties in food processing, adult social care, construction and hospitality. As the economy recovers, have labour shortages therefore become the new norm in older industrial Britain?

Monthly data from the ONS Vacancy Survey shows that the number of vacancies fell from around 800,000 prior to the pandemic to a low of not much more than 300,000 in the spring of 2020. As the economy reopened in the late spring and summer of 2021 pre-pandemic vacancy levels returned and were then exceeded, reaching a new high of over 1.2 million.

UK job vacancies, October 2019 – October 2021



Sources: ONS, DWP

The first point to note about the vacancy data is that there was always going to be a surge in recruitment as the economy reopened. During lockdown many employers simply put recruitment on hold because of the uncertainty and practical difficulties. Some of the later increase in vacancies will be employers attempting to fill posts that fell vacant during lockdown.

A second point to note is that as the labour market loosens up, as it during 2021, it triggers a higher level of job turnover as more workers begin to move from employer to employer. This in turn results in a higher level of vacancies. At any point in time, many vacancies are not 'hard-to-fill posts' but instead just jobs that have become vacant as the previous employee has moved on. Before the pandemic, the government's Labour Force Survey recorded around 700-800,000 job-to-job moves in most quarters. This fell to not much more than 500,000 during the worst of the downturn before rising to just over 1 million in the July to September quarter of 2021. In part, vacancy data measures no more than labour turnover.

The ratio between the number of claimant unemployed and the number of vacancies is probably a better guide to competition for jobs. During the pandemic the number of unemployed per vacancy surged from around 1.5 to a peak of more than 8, partly because the number of vacancies fell and partly because of the big increase in unemployment. By October 2021 the ratio across Britain as a whole was back down to 1.5 – no higher nor lower than pre-pandemic levels.

The local and regional position is less clear. The ONS Vacancy Survey data is only published for the UK as a whole. A second ONS data source, based on online job adverts²⁶, provides a regional breakdown. This also points to vacancy numbers that are now above pre-pandemic levels but it also shows a somewhat slower recovery in London and the South East.

An analysis by the Institute for Fiscal Studies²⁷, based on data up to the summer of 2021, dispels the notion of a generalised shortage of workers. The report observes that although at this point overall job vacancies slightly exceeded pre-pandemic levels:

- For a quarter of the workforce, new job opportunities remained more than 10 per cent below pre-pandemic levels
- The post-pandemic recovery in vacancies has been strongest in traditionally lower-paid occupations, notably lorry driving and warehousing
- Competition for jobs in a number of other fields is also lower than pre-pandemic but for nearly two-thirds of unemployed workers the competition for relevant new job opportunities is at least 10 per cent greater than before the pandemic

The IFS report concludes that the handful of high-profile labour-shortage occupations, while real and disruptive, should not mislead about the overall state of the labour market.

²⁶ Collated by the online search engine ADZUNA.

²⁷ M Costa Dias, E Johnson-Watts, R Joyce, F Postel-Vinay, P Spittal and X Xu (2021) *Job opportunities during the pandemic*, Institute for Fiscal Studies, London.

Migrant workers

Labour shortages have been exacerbated, it has been argued, by Brexit and a decline in the number of migrant workers. The end of free movement makes it more difficult to recruit EU workers to fill low-skill jobs and there has been speculation that during the pandemic there was an exodus of migrant workers. One well-publicised estimate²⁸ suggested that during 2020 the UK population may have fallen by as much as 1.3 million, with London alone losing 700,000. There is an absence of reliable data but that significant numbers of EU nationals returned home during the pandemic, and that fewer came to the UK replace them, does seem plausible.

The latest official figures²⁹ suggest that the number of EU nationals resident in the UK fell from 3.7 million to 3.5 million during 2020. The pandemic disrupted data collection so there is a high level of uncertainty around these numbers and their accuracy has been challenged³⁰ but if the figures are to be believed the loss of migrant workers has been far smaller than had first been suggested. The reduction in the number of EU nationals working as lorry drivers, for example, is estimated to be just 12,000, or around 4 per cent of the total number of lorry drivers working in the UK³¹.

If there has indeed been an exodus of migrant workers the main impact is nevertheless unlikely to have been on the towns and former coalfields of older industrial Britain. Non-UK nationals have for some years been concentrated in London and the other big cities where they have accounted for a much higher proportion of the workforce. Beyond the cities, in large parts of the North East, South Wales and Scotland for example, the proportion of non-UK nationals is typically less than 3 per cent.

Non-UK nationals as % of total population, 2019

London	22.4
Main regional cities	12.8
UK average	9.4
South East England	8.0
Older industrial towns	5.6
Former coalfields*	5.2

Source: APS

*Local authority-based definition

²⁸ M O'Connor and J Portes (2021) *Estimating the UK population during the pandemic*, Economic Statistics Centre of Excellence, London.

²⁹ Office for National Statistics (2021) *Population of the UK by country of birth and nationality: 2020*, ONS, London.

³⁰ M O'Connor (2021) *Weighting in Vain*, blog, November 2021.

³¹ Source: Annual Population Survey.

What this geography means is that if there has been a substantial exodus of migrant workers during the pandemic the largest losses are likely to have occurred in the London and the big cities, so there is little reason to suppose that the loss will have overturned long-established job shortfalls in much of older industrial Britain.

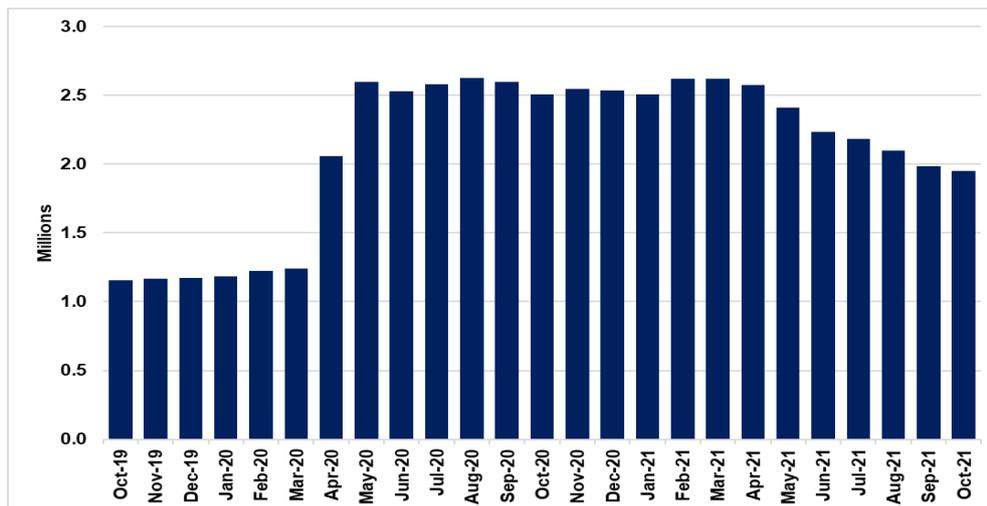
Furthermore, sectors such as warehousing and food processing that employ significant numbers of migrant workers have been among the industries least affected the pandemic. If anywhere in Britain has retained its migrant workforce during the pandemic it is therefore likely to be older industrial towns in the North and Midlands – places such as Barnsley, Doncaster, Wigan, Warrington, Bolsover and Worksop – that have come to rely on warehousing and distribution as a replacement for jobs lost in mining and manufacturing.

Unemployment

In the difficult circumstances of the pandemic, when active job-seeking often became problematic, the unemployment figures derived from the government’s Labour Force Survey are likely to have understated the true scale of the problem, as we noted earlier. Here we therefore focus on claimant unemployment – the numbers in receipt of benefit (these days mainly Universal Credit) on the grounds of unemployment.

After a sharp increase at the beginning of the pandemic the number of claimant unemployed across Britain as a whole plateaued around 2.5 million and then from the spring of 2021 began to fall away as the economy reopened, dipping below 2.0 million in October 2021.

GB claimant unemployment, Oct 2019 – Oct 2021



Source: DWP

The final month here is especially important because it is the first for which unemployment data became available following the closure of the Coronavirus Job Retention Scheme at the end of September 2021. What the figures show is that the wind-up did not lead to a surge in unemployment, even though just over 1 million remained furloughed until the very end.

Nevertheless, in October 2021 claimant unemployment remained more than 700,000 higher than before the pandemic. The inconsistency between this substantial increase and the employee numbers, which have largely returned to pre-pandemic levels, can probably be explained by two main factors. One is a large reduction in self-employment during the pandemic – a fall of more than 500,000, some of whom will have added to the unemployment figures. The other is an on-going increase in labour supply as fewer opt out of the labour market to look after family or home – 200,000 fewer during the pandemic³².

Since the spring of 2021, claimant unemployment in older industrial Britain has fallen more slowly than in London, where a faster reduction is now offsetting an above-average increase during the pandemic.

**Reduction in claimant unemployment rate*, April – Oct 2021
(% point)**

London	2.5
Main regional cities	2.1
GB average	1.9
Older industrial towns	1.9
South East England	1.8
Former coalfields	1.8

Source: DWP

*% of economically active 16-64s

London's economy is widely understood to have been hit hard by the pandemic and the figures presented earlier on the increase in claimant unemployment through to November 2020 seemed to bear this out. International tourism dried up, theatres shut down, office workers stayed away from their desks and all this had knock-on consequences for shops, cafes, restaurants and pubs, and in turn for local unemployment levels. However, the more recent unemployment data indicates that in London a strong recovery is now underway. The full damage to London's labour market during the pandemic has not yet been overcome but the trajectory is positive and, in many respects, predictable.

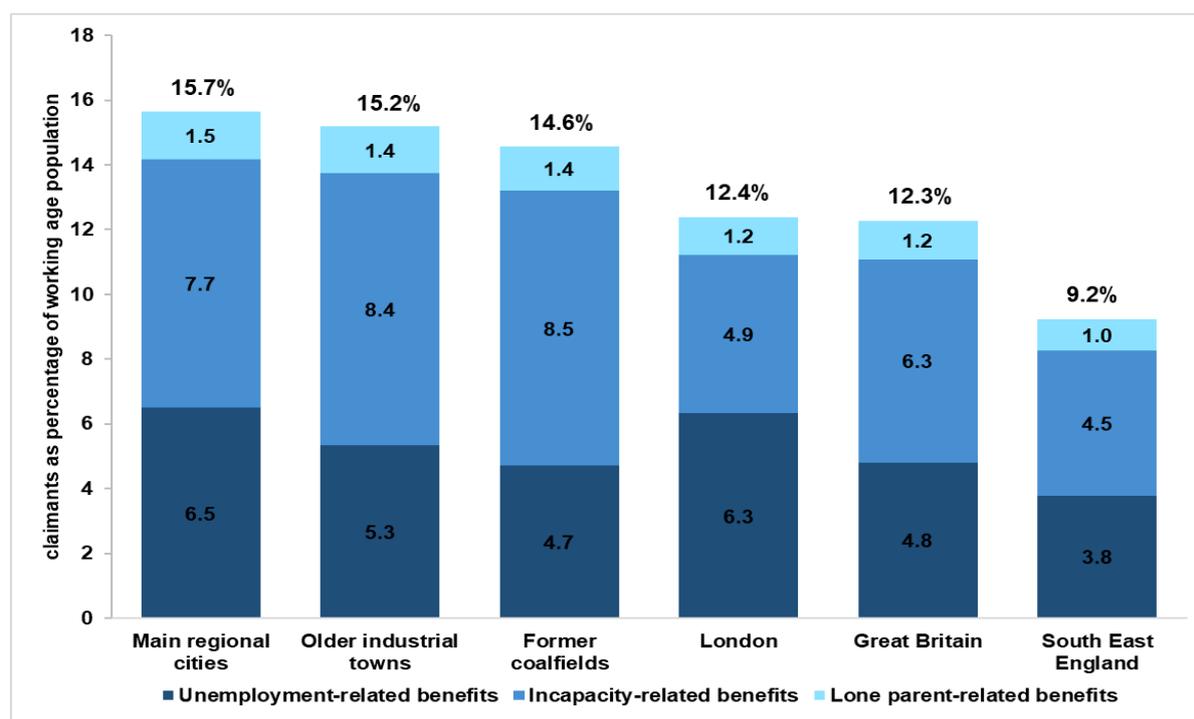
Looking ahead, as tourism recovers and as public confidence in travelling and mixing returns, further growth in the London economy seems likely. Furthermore, if flexible working does permanently reduce commuting into London – which must be a real possibility – and thereby reduce the day-to-day spending supporting city-centre businesses, it is worth remembering that if there has been a loss of migrant workers during the pandemic the biggest losses are also likely to have been in London. In London, labour demand and labour supply will have shifted down together. There is therefore little reason, at this point, to suppose that the pandemic will lead to a permanent hike in London's unemployment that shifts the ranking of 'problem areas' across the country.

³² Changes between April 2019/March 2020 and July 2020/June 2021. Source: APS.

Out-of-work claimants

Unemployment is only one element of worklessness on benefits, as we noted earlier. Older industrial Britain entered the pandemic with an overall out-of-work claimant rate that was well above the national average and far above the most prosperous parts of the country. The pandemic has not significantly changed this picture. Whilst the number of claimant unemployed rose sharply and then fell back, the numbers on incapacity benefits remained high and largely stable. With incapacity claimants accounting for such large numbers in older industrial Britain, the overall out-of-work claimant rate remains well ahead of most other parts of the country.

Working age out-of-work benefits claimant rate, Oct 2021



Sources: DWP, APS

In October 2021, around 15 per cent of all adults of working age in older industrial Britain remained out-of-work on benefits, compared to just 9 per cent in South East England³³. The absolute numbers on out-of-work benefits remained very high in older industrial Britain – nearly 1.6 million in older industrial towns, 620,000 in the former coalfields and 600,00 in the main regional cities.

³³ Because of lags in the publication of some statistics the overall out-of-work benefit claimant data for October 2021 combines claimant unemployment (October), Employment and Support Allowance claimants (May), Incapacity Benefit claimants (May), Universal Credit claimants on the grounds of limited capability to work (August) and lone parents on Universal Credit planning or preparing for work (October).

Universal Credit

At the beginning of October 2021, the UK government withdrew the £20 a week top-up to Universal Credit introduced at the start of the pandemic. The withdrawal was controversial and inevitably has a greater impact in the places where there are larger numbers of UC claimants, including older industrial Britain.

In August 2021, prior to withdrawal of the top-up, 1.2 million households in older industrial towns, 400,000 in the former coalfields and 470,000 in the main regional cities were receiving Universal Credit. These included in-work households on low incomes as well as most of the claimant unemployed and some transferred from other benefits. Assuming each household loses £20 a week³⁴, the financial loss adds up to nearly £1.3bn a year in older industrial towns, more than £400m a year in the former coalfields and almost £500m a year in the main regional cities.

Estimated impact of withdrawal of £20 a week top-up to Universal Credit

	Older industrial towns	Former coalfields*	Main regional cities
Households receiving UC**	1,243,000	402,000	472,000
Annual financial loss	£1,290m	£420m	£490m
Children in UC households**	1,067,000	354,000	379,000

Sources: DWP and authors' calculations

* Local authority-based definition

**August 2021

The number of children in households affected by the withdrawal of the £20 a week top-up to Universal Credit is more than 1 million in older industrial towns, more than 350,000 in the former coalfields and approaching 400,000 in the main regional cities.

The lower claw-back of Universal Credit as earnings rise, announced in the October 2021 Budget, will partially offset these financial losses but only for in-work households. The unemployed, the sick and disabled and lone parents without work will normally face the full impact of the withdrawal of the £20 top-up.

³⁴ In practice some in-work households will not lose the full amount because they were previously receiving less than £20 a week.

5. IMPLICATIONS FOR LEVELLING UP

The post-pandemic economy: assessment

The UK government's management of the Covid-19 pandemic triggered the biggest reduction in economic output in modern times. Claimant unemployment soared by 1.4 million and, at peak, almost a third of all employees were furloughed. During 2021 there was a sharp recovery, though by the autumn GDP was still a little below pre-pandemic levels.

The cities, towns and communities of older industrial Britain have all been caught up in this rollercoaster ride. Nevertheless, the most striking observation from the evidence presented in this report is *how little has really changed*. Older industrial Britain entered the pandemic lagging badly on a range of indicators, it was hit hard by the pandemic in terms of health and prosperity, and it leaves the pandemic still adrift of most of the rest of the country in terms of economic well-being.

In this sense the recent downturn has differed from several previous recessions, which have often been marked by a distinctive local and regional geography. In the recession of the early 1980s, for example, there were huge job losses in the industrial heartlands of the Midlands, North, Scotland and Wales and for these places there was no swift bounce-back. In the recession following the 2008 financial crisis, London suffered less and bounced back more strongly than just about anywhere in the UK.

The evidence in this report shows that the pandemic downturn has been different. It hit all parts of the country hard, and recovery has kicked in more or less everywhere. True, for a while claimant unemployment in London did rise faster than in the rest of the country but as the economy reopened during 2021 claimant unemployment in London also began to fall faster than elsewhere. This was to be expected, given the prominence of hard-hit sectors in London's economy. But by the autumn of 2021 the economic geography of Britain was largely back where it started, or at the very least heading there.

The contemporary debate around labour shortages does not deflect from this assessment. There are unquestionably real problems in a handful of sectors. However, the evidence on labour shortages across the economy as a whole is more nuanced and, as best it is possible to tell from current data, the reduction in the number of migrant workers during the pandemic has been modest and almost certainly concentrated in London and the big cities. Indeed, if labour demand from cafes, shops and hotels in the big city centres has been slow to return to pre-pandemic levels, and perhaps never quite gets there because of the growth in working from home, this may well be matched by a fall in the supply of labour in the same places.

The long-standing job shortfalls in older industrial Britain have therefore not suddenly disappeared, as the continuing scale of unemployment confirms. Prior to the pandemic, in much of older industrial Britain it was usually possible to find a job at or close to the national minimum wage, especially if you were not fussy about shift patterns or the nature of the work, but good jobs with decent terms and conditions and longer-term prospects were always harder to find. Beyond the pandemic this remains the case.

If the country's economic geography is largely back where it started, as the evidence indicates, this has profound implications for public policy. In the weeks and months before the pandemic the UK government made much play of its intention to level up the regions. Older industrial Britain was quite reasonably expected to be a prime beneficiary of this new priority. Indeed, this remains an expectation among voters in the Midlands, North, Scotland and Wales who helped secure the Conservative's general election victory in 2019 and among newly-elected MPs from these areas.

The need to press ahead with Levelling Up is therefore as real as when the virus first struck. All parts of the country have passed through an extraordinary and unprecedented period but, beyond the pandemic, much of the economic landscape is surprisingly familiar. Older industrial Britain was in need of Levelling Up before the pandemic and that remains the case today.

The policies that are needed

It is the weakness of the economy and the labour market in much of older industrial Britain that lies at the heart of the multiple problems documented earlier in the report – low employment rates, below average productivity, low earnings, slow growth and high levels of worklessness. Getting the economy right must be the first priority.

In doing so it is important not to 'blame the victim'. If there are too few good jobs in older industrial Britain this is not because the local workforce is less able or productive. There are fewer graduates in older industrial towns and in the former coalfields for example, but this is mainly because there are more graduate-level jobs in other places and the highly-qualified move to where they can find work. Likewise, the below-average productivity in much of older industrial Britain, reflected in GVA data, is primarily a reflection of the types of jobs in the local economy, not the industriousness or efficiency of employees.

The primary requirement in most of older industrial Britain is for *more jobs and better jobs*. This was the case before the pandemic and it remains so.

There has never been a single 'silver bullet' that will deliver more jobs and better jobs. Successful regional and local economic development generally requires action across a broad front and it is often only the conjunction of several policies or initiatives in the same place at the same time, or sometimes in sequence, that triggers real progress.

Interventions also need to take place at the right spatial scale. Most local economies and labour markets spill over across local authority boundaries but stop short of standard statistical regions. The sub-region, or ‘functional economic area’, is therefore the appropriate scale at which to intervene, and it is at the sub-regional scale that the economic disparities across the UK are generally most marked. The North of England, for example, includes prosperous sub-regions just as the generally better-off South includes some disadvantaged areas too. Combined authorities, city regions and some counties come close to the sub-regional geography at which local economies operate.

A June 2021 report, endorsed by more than 40 council leaders and elected mayors, set out the Levelling Up policies needed to support growth and jobs across the North of England³⁵. As the UK economy emerges from the pandemic, the proposals in the report have wider applicability across older industrial Britain:

- A **UK Shared Prosperity Fund** that provides a genuine replacement for EU funding to the regions. The new fund, due to come into operation in April 2022, should to be allocated using a needs-based formula with strong targeting on less prosperous local economies.
- A new UK **Subsidy Control regime**, to replace EU State Aid rules, that allows support for business investment and in particular includes a new UK Assisted Area map that permits more generous support in less prosperous parts of the country.
- A **step-change in funding** for local and regional economic development. Too much Levelling Up funding has so far been old money under a new label, or has been modest in relation to the scale of the challenge. The rebuilding of East Germany following reunification – perhaps a comparable challenge – is reputed to have cost €2 trillion between 1990 and 2014³⁶.
- A new emphasis on growing **manufacturing**, which remains a large component of the economy in older industrial Britain. There needs to be a business environment that encourages investment and innovation, a competitive exchange rate, and protection from unfair foreign competition.
- Support for **training and skills**, particularly apprenticeships and lifelong learning. Strengthening the economic base of older industrial Britain will create the context for those with top skills to stay local.
- Investment in the **green economy** to lower carbon emissions and bring new jobs. Energy intensive industries should be helped to reduce their emissions, not discarded.

³⁵ S Fothergill and T Gore (2021) *Plan for the North: how to deliver the levelling up that's really needed*, CRESR, Sheffield Hallam University.

³⁶ K Enenkel (2021) *What can German reunification teach the UK about levelling up?* blog, Centre for Cities.

- A diversion of **R&D spending** away from the golden triangle of Oxford/Cambridge/London, with more emphasis on practical support for product development and the improvement of production processes.
- Investment in **infrastructure** – not just in speedier transport connections between the big cities but also more modest investments in a much wider range of local improvements.
- **Gap funding** for land and property development, to bring forward brownfield sites and help provide industrial and office floorspace in the places private developers presently avoid.
- A new round of **devolution** of power and responsibility to local councils, combined authorities and city regions, to build on local knowledge and initiative in organising local and regional economic development.

**Sheffield
Hallam
University**

Centre for
Regional Economic
and Social Research

Centre for Regional Economic and Social Research
Sheffield Hallam University, City Campus, Howard Street
Sheffield S1 1WB, UK

T: 0114 225 3073

E: cresr@shu.ac.uk

W: www.shu.ac.uk/cresr

ISBN: 978-1-84387-437-9

DOI: 10.7190/cresr.2021.1054106944

