

# CIVITAS

## REBOOTING BRITAIN

HOW THE UK ECONOMY CAN RECOVER FROM CORONAVIRUS



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This report is jointly published by the Institute of Economic Affairs and CIVITAS.

It forms part of the IEA's COVID-19 BRIEFING series. IEA Briefing Papers are designed to promote discussion of economic issues and the role of markets in solving economic and social problems. As with all IEA publications, the views expressed are those of the author and not those of the Institute (which has no corporate view), its managing trustees, Academic Advisory Council or senior staff.

It also forms part two of the COVID-19 REVIEW series from CIVITAS on how the UK responded to the coronavirus.

There will be plenty of official inquiries into the Covid-19 pandemic and the British Government's response to it. And this series of reports is intended to help those sitting on these inquiries, as well as the public, MPs, peers and experts, to ask the right questions.

To ensure proper accountability and independent scrutiny, the COVID-19 review series is inspired by the need respectfully to examine some of the roots and handling of the crisis and how we can best prepare for future outbreaks.

The authors do not doubt the huge efforts of all involved in addressing the pandemic, from the frontline medical staff, to all those in care homes and the ancillary services, through to our political leaders. Nor do we doubt that, throughout the crisis, they acted with the best of motives.

But there are clearly alternative approaches and different national rates of success in responding to Covid-19. What is important is that we learn the right lessons from this outbreak so that, next time, it really will be different.

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### Summary

- The uncertainty created by the Covid-19 crisis has reinvigorated many old debates about the role of the state. Some argue that it has demonstrated the need for a permanent increase in government intervention and public spending. The evidence does not support this view.
- This crisis has highlighted the flexibility of private businesses and civil society - and illustrated weaknesses in state planning. In particular, the UK's healthcare system has struggled to keep up with those in other countries, notably Germany, where market forces play a bigger part.
- Nor is this a 'failure of capitalism'. Activity has slumped partly because
  the state itself has temporarily shut down large parts of the economy.
  But the relative flexibility of the UK economy and labour markets could
  help activity and employment to bounce back, provided businesses
  and employers are not saddled with additional costs.
- However, the risks to the economy should not be downplayed. The
  initial decline in activity may prove to be smaller than some fear, but it
  will still be huge, and lifting the lockdown may not be sufficient in itself
  to allow a robust and speedy recovery.
- There is also plenty of evidence that the official lockdown has exacerbated the economic impact. Indeed, if the official lockdown were not having any additional effects on behaviour and hence on economic activity, it would prompt the question of why it is needed at all.
- Historical precedents suggest that the pandemic could last until the summer
  of 2021. In the meantime, many businesses (restaurants, clubs, theatres)
  simply cannot operate in the new world of social distancing and will fail.
  Others (such as air travel) are going to suffer severe reductions in output
  and will need a new business model. There could be substantial frictional
  unemployment as people take time to transition from one sector to another.

- But if markets are liberalised and allowed to operate freely as we emerge from lockdown, the recovery may still be quicker than many think, as was the case in West Germany after the war.
- This could mean getting rid of planning rules which hinder the transformation of the high street, occupational rules which reduce labour market flexibility, and a host of other employment obligations and prohibitions which reduce job opportunities.
- There could also be a fundamental rethink of planned increases in the National Living Wage. One way of rebuilding a prosperous economy that benefits everybody, especially those 'left behind', is to restore full employment, not to price workers out of a job or disincentivise them from seeking work.
- Higher taxes on individuals and corporations could slow the recovery. The fiscal costs of the crisis at least could be manageable without the need for tax increases, or 'Austerity 2.0'. Government borrowing could shrink again as the economy recovers and the emergency fiscal measures are wound down. In the meantime, debt will be higher, but the increase should be readily financeable at low interest rates and there is no pressing need to pay it back.
- However, the sharp deterioration in the public finances may weaken
  the argument for even more fiscal stimulus. There could be a case for
  bringing forward some infrastructure spending, as long as the projects
  are worthwhile in their own right, and for increasing investment in skills
  training. But the focus could be on measures that help the supply side,
  including targeted tax cuts and deregulation, rather than 'creating jobs'.
  The gradual easing of the lockdown and the return of consumer and
  business confidence could be sufficient to kick-start the economy.
- The Coronavirus Job Retention Scheme (CJRS) has played a valuable role in protecting jobs and incomes in the short run. But it is expensive and distortionary, and there are dangers in keeping defunct businesses on life support. Instead, they could be allowed to fail, freeing up resources for more productive uses.
- Large across-the-board increases in public sector pay and in welfare benefits may be inadvisable. In particular, a permanent Universal Basic Income could be poorly targeted and disproportionately expensive.

- Within the financial markets, additional regulation of 'short sellers' could prove counterproductive, as could imposing any further conditions on emergency support for companies, such as new environmental obligations or restrictions on dividends.
- Finally, a lurch towards protectionism is possible. It is true that globalisation or, more accurately, global travel has helped to spread Covid-19. But cross-border supply chains have held up relatively well, ensuring stable supplies of food, business inputs and consumer goods. It could be highly damaging to jeopardise the benefits of trade and international travel just in case this might help to reduce the costs of a future pandemic.

### Introduction

The Covid-19 pandemic is primarily a health and social welfare crisis. But it also presents huge challenges for policymakers who are trying to protect businesses, jobs and incomes, so that the economy can quickly reboot once the lockdown is lifted. And while the saving of lives is rightly the priority, the extent and duration of the economic disruption could also have significant impacts on health and wellbeing.

#### What we don't know

These challenges are compounded by many unknowns. Economists (notably Frank Knight (1921)) have often distinguished between 'risk' and 'uncertainty'. 'Risk' describes problems where people have a good idea of the range of possible outcomes and their likelihood. But in conditions of high 'uncertainty', we may not even know what the possible outcomes are, let alone their relative probabilities. This makes it particularly hard to identify the 'counterfactual', or what would have happened anyway if the government had not acted.

The Covid-19 crisis is a good, if grim, example of this. Important unknowns include:

- The number of premature deaths that might be linked to the coronavirus and could be prevented by government intervention.
- The lives that might be lost as a result of other people not getting the treatment they need for unrelated conditions, such as cancer or heart attacks.
- The negative impacts of the economic shutdown on health and wellbeing.

- Any positive impacts of the economic shutdown on health and wellbeing, such as fewer road accidents or a reduction in pollution.
- How people might have changed their behaviour even without being instructed to do so by the government.

Given these uncertainties, there is a danger that policymakers focus too much on the most easily identifiable victims of coronavirus itself, and not enough on less visible but potentially larger costs elsewhere.

#### Problems with the data

In addition, policymakers are working with imperfect information on some of the most basic facts. This includes the number of people who already have, or have had, Covid-19, and the number of Covid-19 deaths outside hospital, including those in care homes.

International comparisons are further complicated by the wide variety of country-specific factors that may influence the impact of Covid-19, including international openness, demographic profile, household structures and population density.

For example, a small country at the heart of Europe with a high population density, such as Belgium, might be expected to report more deaths per million people than a distant country with a more dispersed population, such as New Zealand. Italy might have been particularly vulnerable because of its relatively old population, with elderly people often living with their younger family members. In contrast, households are typically smaller in Sweden, where people also tend to enjoy better health to begin with.

Different countries also report their data in different ways (Morris and Reuben 2020). Some, including France and Germany, have been quicker at including deaths in care homes in their daily data. And while most countries only count a death as Covid-related if someone has actually tested positive, Belgium includes any death in which a doctor suspects the coronavirus was involved.

It therefore makes sense to focus on the broadest possible measures, such as 'excess deaths' which simply compare the total number of deaths to the average for the time of year. On this basis, data compiled by the *Financial Times* suggest the UK is on par with Spain and Italy, but has seen more deaths per million than Sweden, and many more than countries

such as Germany and Denmark (Burn-Murdoch and Giles 2020). However, even these data are subject to large revisions.

#### What we do know

We do at least know a lot more about Covid-19 itself. The case fatality ratio appears to be relatively low (less than 1 per cent), at least compared to other respiratory viruses, such as SARS(about 10 per cent) or MERS (more than 30 per cent) (Rajgor et al. 2020). However, Covid-19 is passed on relatively easily in enclosed spaces, though less so in the open air.

The most vulnerable are the elderly (Covid-19 risk rises with age, closely matching the age-related risk of dying from any cause) and those with other health problems that may make them particularly susceptible to respiratory diseases. Frontline staff such as security guards, bus and taxi drivers, and care workers also seem to be more vulnerable.

There are fears too that there may be a disproportionate number of deaths among black, Asian and other minority ethnic (BAME) groups. The evidence here is not conclusive, but the government has been sufficiently concerned to set up an enquiry. It is known that people in these groups are more likely to live in overcrowded households, be poor, have frontline jobs, have other underlying health problems, and live in urban areas, especially London, where the UK's population density is highest.

However, recent NHS England figures do at least show that the number of deaths in hospitals of people who have tested positive for Covid-19 has been trending down since 8 April, based on the actual date of death (rather than when the death is reported) (NHS 2020).

#### Overview of this paper

The focus of this paper is the overall impact of Covid-19.It begins with a discussion of the immediate impact on GDP and unemployment, some lessons from past pandemics, and the pros and cons of ending the lockdown sooner rather than later.

The second section addresses the question of 'who will pay for all this', including the potential implications for government borrowing, spending and taxation, and inflation.

The third section looks in more detail at the employment issues, while the fourth discusses some questions that have been raised around the behaviour of some participants in financial markets.

The final section concludes with a longer view of what the crisis might mean for the future of the UK economy. Has the crisis strengthened the case for a permanent increase in the size and role of the state – or weakened it?

# What will the economic impact be?

#### The big picture

The Covid-19 crisis is already having a devastating impact on the global and UK economy. What's more, while this impact is being compounded by the lockdowns in many countries, some of the damage would occur anyway.

The coronavirus outbreak has hit the UK economy through three main channels. First, there was the blow to consumer and business confidence even before there was much tangible damage to activity. This was reflected in sharp falls in the prices of riskier assets, including equities and commodities, which began in late February.

The second channel is the impact on the supplyside of the economy and the ability to produce and distribute goods and services. Initially this mainly affected international travel and supply chains, especially those dependent on imports from China.

This supply shock has become a far bigger domestic problem now that large parts of the UK economy are shut down and many more people are unable to work as normal. Even before the lockdown was imposed, the government's 'reasonable worst case' assumed that up to a fifth of the labour force might be out of action at any one time (BBC News 2020).

The third channel is the impact on the demandside of the economy. Businesses and consumers have reduced their spending, either because their incomes have fallen, or because they are unable or unwilling to buy the goods and services that they would normally buy. Again, this abundance of caution may last well beyond the lockdown itself.

Nonetheless, there is also plenty of evidence that the official lockdown has exacerbated the economic impact, at least in the short term. For example, while average hours worked and online job adverts had already been falling before the lockdown was introduced, they collapsed afterwards. Similarly, claims for Universal Credit surged after the lockdown began. Indeed, if the official lockdown were not having any additional effects on behaviour and hence on economic activity, it would prompt the question of why it is needed at all.

Altogether, these shocks are certain to tip the UK economy into a deep recession. The aim of policy is no longer to stimulate growth. Instead, it is about shielding the economy while it is put in a state of temporary hibernation. Provided the great majority of businesses, jobs and basic incomes can be protected, normal economic activity should be able to resume relatively quickly once the emergency health measures are lifted. But in the meantime, a slump in GDP is inevitable and even desirable; we want most people to stop doing what they would normally be doing, in order to save the lives of others.

That said, there are valid concerns about longer term 'scarring' to the economy, whether in the form of persistently high unemployment, the loss of job-specific or firm-specific capital, or the impact of prolonged uncertainty and increased debt on business investment.

Indeed, there is a case for downplaying the GDP data for a while and focusing instead on the figures for corporate failures, job losses,increases in corporate and household indebtedness, and so on. But GDP is the obvious place to start.

#### The numbers: GDP and unemployment

Given all the uncertainties, it makes sense to talk in terms of 'plausible scenarios' rather than 'forecasts', and any hard numbers are more than usually dependent on the assumptions made.

For example, the 'coronavirus reference scenario' published in April by the Office for Budget Responsibility (OBR) assumed that there would be a full three-month lockdown, followed by another three months when restrictions are only partially lifted, that all of the initial impact is felt in Q2 (in practice, activity was already collapsing towards the end of Q1), and that the level of GDP returns to its starting point as soon as the end of this year (OBR 2020).

On this basis, after a 35 per cent slump in the second quarter, GDP would fall by 13 per cent in 2020 as whole, then rebound by 18 per cent in 2021. The unemployment rate would jump from about 4 per cent of the labour force to 10 per cent, before falling back slowly as the economy recovers.

Other 'plausible scenarios' are available. The initial fall in GDP may well be much smaller than the OBR's first estimate, but the recovery could take much longer. In this respect, the latest forecast from the National Institute of Economic and Social Research (NIESR) is probably closer to the mark (NIESR 2020).

NIESR has penciled in a decline of 'only' 7 per cent this year. The lockdown itself is assumed to reduce GDP by 30 per cent but starts to be lifted in mid-May. On this basis, GDP is projected to fall by around 5 per cent in Q1 and 15 per cent in Q2. Unemployment therefore does not rise quite as far as in the OBR's scenario, peaking at around 3 million (8.5 per cent of the labour force). However, NIESR assumes that GDP will not regain its pre-crisis level until the end of 2021.

Nonetheless, the similarities between the OBR and NIESR analyses are more important than the differences. Both assume a huge hit to GDP, followed by a fairly rapid recovery. And while they each have a large rise in unemployment, both assume that government measures are effective at limiting job losses.

The implications for the public finances are discussed in more detail in the next section. In short, government borrowing will jump as a result both of the direct costs of the fiscal measures being taken to support public services and protect businesses, jobs and incomes (together likely to be at least £100 billion), and the knock-on effects of a steep fall in GDP on government spending and tax revenues (which could easily add another £100 billion).

#### How does this compare to other countries?

Most European countries imposed lockdowns within a few weeks of each other and the immediate economic impacts have also been similar. Those European countries that were first to impose lockdowns have reported large falls in GDP in the first quarter, as has the US, with even bigger declines expected in the second quarter. Monthly business indicators, such as the PMI surveys of business activity<sup>2</sup> are painting much the same picture everywhere.

However, there are still some notable differences. In particular, the Swedish economy has held up better than most, including its near neighbours, which suggests that a more liberal approach does lessen the economic impact. More encouragingly, the composite PMI indices of most countries had begun to recover in May, after collapsing in April.

The national economic policy responses have been much the same too. Just as in the UK, foreign governments and central banks have provided additional fiscal and monetary support. Job retention schemes have also been introduced in other major European countries as well, covering over 30 million workers in total (Arnold 2020).

In contrast, there has been relatively little action from multilateral organisations, including the International Monetary Fund and the European Union. This has prompted much criticism, some of which is not entirely fair. Most advanced economies have the resources to act independently, or jointly with their peers, without the need for organisations such as the IMF to get involved. These organisations will have a bigger role to play when it comes to channeling money to poorer nations, notably developing countries, which are less able to cope on their own.

Many of the most important decisions – including public health measures – are also still competences of individual member states of the EU, rather than the EU itself. The EU's rules and regulations, including on state aid, have not yet prevented its members, or the UK, from taking emergency measures to support the economy either.

Nonetheless, the Covid-19 crisis has again exposed tensions in the EU, particularly between the stronger and weaker members of the euro area. Italy and Spain have been among the countries worst affected by the

<sup>2</sup> See, for example, 'PMI by IHS Market' (https://www.markiteconomics.com/Public/ Release/PressReleases).

pandemic but also have some of the highest levels of government debt. However, countries in a stronger fiscal position, notably Germany, have been reluctant to underwrite further borrowing, or provide outright grants.

The European Commission has proposed a plan to provide €500 billion in grants to EU countries hit hardest by the pandemic, and another €250 billion as loans (European Commission 2020). But this package still has to be approved by member states as part of the 2021-2027 multi-annual EU budget.

The European Central Bank's own actions have also appeared to be half-hearted. ECB President Christine Lagarde has apologised for poorly judged comments on the limits of monetary policy, which appeared to have hung the southern European states out to dry. This is in sharp contrast to the UK, where fiscal and monetary policy responses have been closely coordinated from the outset.

#### Is it worth it?

The massive economic disruption caused by the lockdown has prompted many to ask whether it is worth it. Some commentators<sup>3</sup> have already attempted a simple cost-benefit analysis comparing the economic costs of the measures being taken with the benefits in terms of the premature deaths that might be prevented.

This approach may seem distasteful, but it is common practice for health economists to put a monetary value on people's lives. This is often based on how much longer people might be expected to live and the quality of that life, or 'Quality-adjusted Life Years' (QALYs). These and other methods are discussed further in the Treasury's Green Book (HM Treasury 2018).

Crucially, this is not about regarding people as simply economic producers. Policymakers are making these sorts of judgements all the time. The same techniques are used to assess the value of lives that might be saved by road safety improvements, and in determining awards of damages in court judgements (Kniesner and Viscusi 2019).

However, it is hard to apply this sort of cost-benefit analysis to Covid-19, not least given the difficulty of comparing apples (deaths from Covid-19),

<sup>3</sup> Toby Young (2020) was one of the first, though many of his assumptions have subsequently been challenged.

oranges (other less visible impacts on health and wellbeing) and pears (economic and fiscal costs).

These issues are explored further in Jessop (2020). In short, the longer the lockdown remains in place, the greater the margin by which the costs are likely to outweigh the benefits.

It may still be right to focus on the impact on health and wellbeing rather than any short-term economic costs. But the balance is shifting even on this score, given the growing evidence of harms that the lockdown is doing to others, including patients who are not getting treated for other conditions, and younger people who are missing out on education and job opportunities.

In addition, the longer the economy is kept shuttered, the greater the risk that the damage will be permanent, making it that much harder to pay for better public services and infrastructure in the future.

#### Lessons from history

Davies (2020) has looked in detail at past pandemics. In short, they tend to occur after prolonged periods of increasing economic integration; the outbreaks begin in highly connected cities that are centres of trade and/ or governance; the pattern is usually one of a series of waves, with the second one historically the most damaging; and they break out in locations where the human world adjoins the natural (because of new pathogens developing in animals and then jumping to humans). These precedents suggest that the current pandemic will last for about 18 months (so until September 2021).

History also provides a few helpful pointers to the appropriate policy responses. Perhaps the least surprising conclusion is that vicious diseases cannot be allowed to run unchecked. One particularly gloomy study of the longer-term economic consequences of 15 pandemics, all the way back to the Black Death in the 14thcentury, found that the fallout persisted for 40 years, or more (Jordà et al. 2020).

More positively, and contrary to the view of some commentators, recent history shows that brief falls in economic activity, or increases in unemployment, do not necessarily lead to a deterioration in health outcomes. US research suggests that a temporary economic downturn is more often associated with a small *improvement* in overall mortality rates,

as a result of indirect benefits such as fewer traffic accidents (Ruhm 2000). Together, these studies suggest that it might be worth taking a large hit to the economy in the short term in order to get on top of coronavirus. That conclusion is supported by a recent analysis of how different US cities responded to the 'Spanish Flu' pandemic of 1918 (Correia et al. 2020). As you might expect, the cities that suffered the most deaths also saw a sharp and persistent fall in economic activity.

But just as importantly, this study also looked at the impact of the sort of restrictions that the UK government is imposing today, such as banning public gatherings, closing schools and churches, and shutting shops and restaurants. The researchers found that those US cities where the authorities intervened earlier and more aggressively did better in terms of mortality rates, without doing any worse in terms of the impact on economic activity. If anything, their economies grew faster than others when the pandemic was over.

On balance, history at least suggests that the lockdown could help both to save lives and to reduce the long-term economic costs of the coronavirus pandemic as well, especially as many of the short-term costs would have been incurred anyway.

But there are some important caveats. This recession is much deeper than normal. The peak-to-trough decline in UK GDP in 2008-09 was about 6 per cent, spread over more than a year. Now we might see a decline of anywhere between 15 per cent and 35 per cent in a single quarter. We are also now more aware of the hidden social costs of recessions (and social isolation), including mental health problems, domestic violence and food insecurity.

There is growing evidence too of a surge in health problems unrelated to coronavirus, for example cancer patients missing treatment, or fewer people seeking help after heart attacks. These are hidden victims whom we should not ignore.

The upshot is that there are no easy answers, and the optimal timing for ending the lockdown – as it was for starting it - will remain a difficult judgement call. This paper therefore does not attempt to come to a firm view on what is right, but here are brief summaries of the arguments on both sides.

#### In favour of extending the lockdown

The peak of the crisis does appear to have been passed and the NHS has been able to cope. But easing off too soon would risk giving away these gains and increase the chances of a bigger second wave (or third and fourth) which would overwhelm the NHS. Stop, start and then stop again would be even worse for the economy and for public confidence. More time could also be needed to improve testing and contact tracing.

#### In favour of easing the lockdown sooner

The lockdown has more than done its job: if anything, the NHS now has too *much* spare capacity. An extended lockdown could be a disastrous blow for the economy – increasing the initial hit and making it much harder to recover. There is a growing risk that more lives will be lost as a result of the lockdown than those that might be saved. In the meantime, other countries are already lifting their restrictions – we could learn from them. Otherwise, it will be hard to maintain public consent for much longer.

### Who will pay for all this?

#### The raw numbers

Again, the OBR's coronavirus reference scenario is as good a starting point as any (OBR 2020a). In mid-April, the OBR predicted that public sector net borrowing (PSNB) would increase by £218 billion relative to the March Budget forecast – taking it to a total of £273 billion in 2020-21, or nearly 14 per cent of GDP.

This increase is due both to the fiscal measures being taken to support public services and protect businesses, jobs and incomes (together likely to be at least £100 billion), and the knock-on effects of a steep fall in GDP on government spending and tax revenues (which could easily add another £100 billion).

Combined with other assumptions (notably the way in which some loans made by the Bank of England are accounted for) this would take the stock of debt to well over £2 trillion. Table 1 also shows the OBR's 'end-March centred' measure for debt as a share of GDP, which has the effect of smoothing the profile. At the low point for GDP the debt-to-GDP ratio will be well over 100 per cent. But even using the OBR's preferred approach, debt is projected to be at least 13 percentage points higher as a share of GDP in 2021-22 than in 2018-19.

Table 1: The OBR's April projections for the main UK fiscal aggregates

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
PSNB (£ billion)	38	47	273	76	63	61	59
PSNB (% GDP)	1.8	2.1	13.9	3.2	2.5	2.4	2.2
Net debt (£ billion)	1,774	1,799	2,203	2,285	2,359	2,428	2,291
Net debt (% GDP)	80.6	92.8	94.6	93.8	93.6	93.2	84.9

Source: OBR coronavirus reference scenario, April 2020.

However, these April numbers are already out of date.

Digging a little deeper, the Coronavirus Job Retention Scheme (CJRS) is the most important element of the package of financial support for businesses during this crisis, both in terms of its nature (subsidising 80 per cent of the wages of millions of furloughed employees) and cost (HMRC 2020; BEIS 2020). There is a similar programme for the self-employed, the Self-Employed Income Support Scheme (SEISS).

The OBR initially estimated that these schemes would cost £42 billion (CJRS) and £10 billion (SEIIS) until the end of June. In addition, the government is expected to spend £15 billion on small business grants, £13 billion on business rates relief, £10 billion on extra funding for public services, and various other smaller measures taking the total direct cost to about £100 billion.

Since then, the CJRS has been extended until the end of October, albeit on different terms (discussed later). In mid-May, the OBR revised up its estimate for the deficit in 2020-21 to £298 billion, but this only included the additional costs for the CJRS until the end of July. With the SEISS also now extended, the combined cost of these two schemes alone could be at least £100 billion, taking the overall deficit towards £350 billion (18 per cent of GDP).

There are other potential costs too which are not yet included in this total. The biggest single number is the (up to) £330 billion being made available via the coronavirus business interruption loan scheme. This money is in

fact coming from commercial lenders, not the Treasury. But the government will guarantee the loans, creating a liability if they are not repaid, and will cover the servicing costs for the first 12 months.

#### How big a problem is this?

The 2020-21 numbers are extraordinary. The annual deficit could easily be five percentage points higher as a share of GDP than the recent peak of 10.2 per cent reached in 2009-2010 after the global financial crisis. If the denominator were based on financial year GDP rather than end-March, government debt could be 30 percentage points higher as a share of national income than its recent peak of 82.9 per cent in 2016-17.

Nonetheless, deficits and debt have both been much higher in wartime, which is arguably the more appropriate benchmark. The OBR's databank shows that the deficit rose to as much as 27 per cent of GDP in 1941-42, while debt hit 259 per cent in 1946-47 (OBR 2020b). Both these numbers improved rapidly as the economy recovered following the war, and government spending returned to more normal levels.

In addition, what is happening now is a one-off jump in annual borrowing (if all goes well) and a step increase in the level of debt, rather than a permanent deterioration in the public finances. The deficit should automatically drop back next year as the economy recovers and the emergency fiscal measures can be wound down.

Total debt will be higher in cash terms, but the debt to GDP ratio is a better guide to the burden on taxpayers. Provided annual borrowing as a share of GDP is kept below the growth rate of nominal GDP (about 3-4 per cent in a normal year), this burden will start falling again.

These points are crucial. Together they mean that there could be no need for large tax increases or spending cuts to bring the public finances back under control. We can still argue about whether the 'austerity' of the early 2010s went too far, or whether the burden was shared fairly, but that sort of belt tightening is not required today. Those already warning of 'Austerity 2.0' can therefore relax a little.

#### Who will pay for all this?

Of course, the money will still have to come from somewhere in the meantime. The surge in government spending will be financed by increased borrowing.

Some of this will come from an extension of the Treasury's 'Ways and Means' facility at the Bank of England, which is, in effect, the government's overdraft with the central bank (Bank of England 2020). However, the use of this facility is only expected to be temporary (rather than a permanent monetisation of the debt) and the primary source of funding will still be the sale of bonds on the open market.

Thereafter, there may be no compelling reason why the government needs to change its fiscal plans significantly – provided the impacts on the economy and especially jobs are indeed short lived. The new(ish) Chancellor, Rishi Sunak, has announced a review of the fiscal rules left by his predecessor. But the OBR projections for 2021 onwards would still be consistent with the broad principles of balancing the budget on day-to-day spending over the economic cycle and borrowing an average of no more than three per cent of GDP for public investment.

The stock of debt will be higher than otherwise as a result of the crisis. Nonetheless, low interest rates and the relatively long average maturity of UK government borrowing mean that the costs of servicing that debt will remain low and there is no pressing need to pay it back.

Inevitably there are risks – and these are mostly on the downside. One is that the economy could take a lot longer to recover than expected, and that it takes a lot longer to replace jobs that have been lost. Some people may find it hard to return to work altogether, adding to the welfare bill. Another risk is that the crisis is already leading to calls for permanent increases in public spending – over and above those already planned for infrastructure, the NHS and social care – in a wide range of areas.

However, provided these risks are averted, the costs of the crisis should be covered by a temporary increase in borrowing, to be gradually repaid at historically low interest rates, with the debt burden falling as the economy rebounds. This is not ideal, but then nothing about this crisis is.

#### Why not just print more money?

It is also worth briefly discussing an alternative view. The use of the 'Ways and Means' facility does amount to 'direct financing' of government spending by the central bank, which is normally taboo. This has encouraged talk that all the increase in debt could eventually be monetised.

Indeed, some commentators, including prominent supporters of 'Modern Monetary Theory' (MMT) (see Matthews 2019), would argue that this is the obvious way out. It is certainly true that central banks can always print more money to pay for increased public spending. There is also no need for countries issuing in their own currencies to default on their national debt.

However, while money itself may not be a 'scarce resource', the same does not apply to the goods and services that it is expected to buy. Otherwise, any country with its own currency could use its magic money tree to pay for world-leading education, healthcare, and so on. Most people, including the more sensible proponents of MMT, recognise that unlimited monetary financing of public spending could simply lead to higher inflation, or crowd out private spending in other ways.

The exception, of course, is when there is plenty of spare capacity in the economy, including high unemployment. But if any government began to believe it could always force the central bank to print money to pay for higher spending, fiscal discipline could collapse, and too much money chasing too few goods would lead to a surge in inflation. This is of course a playbook we have seen in many other countries before.

For these reasons, it seems far more likely that both the Bank of England and the Treasury would want the additional overdraft under the 'Ways and Means' facility to be paid off by the end of the year. Given the strong demand for government bonds it should still be straightforward to wind down the facility and replace it with conventional borrowing in the gilt market. Nonetheless, even if government debt is not directly monetised, the net effect of all the central bank interventions (both in the UK and elsewhere) has been a surge in broad money growth. This is potentially inflationary, especially if the demand side of the economy recovers more quickly than the supply side.

This would not necessarily be a bad thing. A step increase in the price level should boost the level of nominal GDP and hence reduce the burden of debt – for companies and households, as well as governments. However,

there is a danger that some people would be left behind and simply see their real incomes fall. And rather than a one-off increase in the price level, an explosion in monetary growth could trigger a spiral of rising costs and prices and permanently higher inflation. As ever, there is no easy way out.

## What is the best way to protect jobs and incomes?

#### Who is affected?

The lockdown has already had a startling effect on employment. Some sectors, such as arts, entertainment and recreation (including sports and fitness), personal care (including hairdressing and beauty), travel and tourism, and accommodation and food, have been effectively shut down in their entirety. Others, such as retailing and passenger transport, have been heavily curtailed.

There are also knock-on effects from sector to sector, as input-output analysis from the University of Essex's Institute for Social and Economic Research (ISER) demonstrates. For example, the ISER suggests that agriculture could lose a tenth of its jobs as the result of sharply reduced demand from accommodation and food services (ISER 2020).

Of course, there is no mechanistic link here, and alert businesses can sometimes repurpose themselves. Retailers have switched resources from shops to online sales. Wholesalers, faced with the collapse of sales to retailers, have started selling directly to the public. Restaurants have branched out into takeaways, which are still permitted. Manufacturers have switched from producing currently unsaleable consumer products to producing ventilators or PPE for the NHS.

Sometimes employees (or self-employed people) can work at home, although the extent to which this is the case has been exaggerated (Shackleton 2020). Moreover, many working at home are currently underemployed: in one survey conducted in early April 41 per cent of people working at home said their productivity had gone down (Kekst CNC 2020a).

Despite these caveats, early indications are that the lockdown has already led to big falls in employment, although the impact of this is being masked by 'furloughing' under the government's Coronavirus Job Retention Scheme, applications for which have hugely outstripped the original predicted figures. By mid-April, the British Chambers of Commerce reported on survey data suggesting that over 70 per cent of respondents had used the Job Retention Scheme, with 30 per cent furloughing between 75 and 100 per cent of their workforce (BCC 2020).

Looking at actual numbers rather than surveys, between mid-Marchand the end of April there were 1.8 million applications for Universal Credit - a figure which compares with an average of 235,000 a month over the previous year. Universal Credit applications will pick up some of those on reduced hours, as well as people who have lost their jobs entirely.

The Resolution Foundation has estimated that 'non-working' could increase by as much as 11.7 million in the second quarter of 2020, made up of 8.3 million furloughed (with 80 per cent of their pay met by the government) and 3.4 million unemployed (Tomlinson 2020). This would represent over a third of the record number of people aged 16 and over in employment, set in the December 2019 to February 2020 quarter before Covid-19 hit the UK.

Even if the Resolution Foundation estimates turn out to be an exaggeration (although the number of jobs furloughed under the CJRS had already reached 8.7 million at the end of May), the fall in employment is certainly going to be very large by historical standards, and unprecedented in its speed.

A consensus is emerging about those workers likely to be hardest hit – the young, low earners and women.

Most analysis is confined to those displaced from sectors which are closed rather than those affected indirectly by reduced demand. As the Institute for Fiscal Studies observes, under-25s are two and a half times more likely to work in a sector which has been shut down (Joyce and Xu 2020). Prior to the lockdown, such sectors employed around 30 per cent of all employees (25 per cent of males, 36 per cent of females) under the age of 25. The IFS also draws attention to low earners, pointing to the fact that one-third of those in the bottom tenth of the earnings distribution worked in a sector which is now shut down, compared with just 5 per cent

of those in the top decile. And it notes that women were roughly one-third more likely to have worked in a shut-down sector than men (17 per cent compared with 13 per cent).

Being young, being a low earner and being a woman are statuses which can overlap, producing multiple disadvantage.

The IFS figures focus on employees, but over 5 million people, around 15 per cent of those in work before the coronavirus crisis, are self-employed. The self-employed are a heterogeneous category but include many of the most highly skilled. 12 per cent of them are in professional, scientific and technical occupations, as opposed to just 7 per cent of employees; 16 per cent are managers or directors (10 per cent of employees) and 26 per cent are in skilled trades (7 per cent of employees).

The sectoral pattern of the self-employed is different from that of the employees. 18 per cent of all self-employed people (as opposed to just 5 per cent of employees) work in construction; much of this sector remains open and it appears that more is soon to re-open (Weinfass 2020). However, for the most part self-employed people are in a very difficult situation. People such as cleaners and hairdressers, who make up a substantial proportion of the female self-employed, normally work outside the home, and their ability to do so now is very limited. And support for the self-employed has not been as comprehensive as that for employees. Much has been made of the availability of loans for small businesses, but few wish to take on more debt – particularly when banks were at first asking for pledges of assets for personal guarantees, even for loans backed by the government (Verity 2020).

A group which has attracted little attention is older workers. People over 70 are statistically at greater risk than the rest of the population from Covid-19, and the thinking seems to be that they should continue to remain at home for their own good, and to protect the NHS from being overwhelmed, even after the rest of the workforce emerges from hibernation.<sup>4</sup>

<sup>4</sup> There are some opinions in favour of continuing self-isolation for those in their sixties as well (see, for example, Boseley 2020).

While economic activity rates are obviously lower for older workers, in recent years more and more have been continuing to work well past the age at which their parents retired. For some this is an economic necessity, given poor pension provision, limited savings and vanishingly low interest rates. For most, however, it reflects improved health in old age, changes in occupational structure with more emphasis on brainwork rather than physical labour, and a growing preference for continuing to make a contribution to society and the economy rather than devoting themselves to golf, cruise ships and gardening.

The most recent figures show that, in the year to September 2019, over 1.3 million of those 65 and over were still in employment. 520,000 of these were over 70, the age group which the government seems minded to keep in semi-permanent house arrest. Some of these – in legal and accounting services, for example, where 18,000 over-70s are still in work – may still be able to work from home in lockdown(ONS 2020).

Others, however, may not. One important sector with a disproportionate number of older workers is agriculture, where working outside the home is essential. Last year nearly 20 per cent of all those working in this sector were over 65; an astonishing 11 per cent - over 35,000 people – were over 70 (ibid.). A requirement that all these workers stay at home indefinitely is likely to have a significantly damaging effect on the agricultural sector at a time when we may be trying to increase domestic production because of trade disruption.

In addition to paid work, retired people are also the backbone of many important voluntary organisations, from helping the National Trust, running charity shops and foodbanks, to keeping non-elite football and cricket clubs going. Apart from the loss of output, and financial hardship to some in this age group, there will be a difficult-to-recover loss of social capital.

It may be that effectively forcing many older workers out of the economy will create new openings for some younger people who would otherwise be unemployed. But there is a danger that many small businesses owned by older people will simply close and jobs disappear as their owners are sidelined. And in the longer term, it may be unwise to signal to younger people that they should simply retire in their 60s. As the population continues to age, and the burden of state pensions and elder care increases, we may need as many over-70s as possible to continue to make an economic contribution.

Another dimension is the geographical one. Most regions or nations within the UK appear to have roughly similar proportions of the workforce employed in sectors where a large part of activity has closed down. The most obvious exception is London: despite the large numbers of people working in sectors such as retail, accommodation and food, entertainment and recreation, for example, a smaller proportion of its total workforce is in sectors which have suffered high levels of business closure.

A more granular analysis has been conducted by Sky News, which looked at the towns most vulnerable to closures as a result of the pandemic (Smith and Garcia 2020). This analysis, based mainly on the proportion of a town's population employed in industries that are temporarily closed, indicates that coastal towns such as Skegness, Clacton-on-Sea and Bridlington, and many former industrial towns such as Tredegar and Llanelli, are those most at risk. Commuter towns in the South East are least affected. Wales is the region at most overall risk, with the most towns featuring in the worst affected tenth of towns overall, with the South East at least risk. Of major cities, Liverpool and Sheffield seem to be at greatest risk.

#### The future

Optimists point out that so far very few workers have lost their jobs, markedly fewer than in some other countries including the United States. The OBR's April scenario assumed a rapid bounce back in GDP – a 'V-shaped' recession - which would imply only a relatively small increase in unemployment (OBR 2020c). However, opinion is shifting. Even assuming a fairly rapid lifting of government restrictions, it seems that an immediate return to pre-lockdown 'normality' is not on the cards.

International consultancy Kekst CNC is tracking opinion in the UK, the USA, Germany and Sweden (Kekst CNC 2020b). UK residents are more pessimistic than those in other countries surveyed, expecting lockdown to last longer; they are also more inclined to sacrifice living standards to save lives. But respondents in each country expect to behave very differently in the future: to travel abroad less, particularly by plane; to go to the cinema less; to attend fewer concerts, exhibitions and other large-scale public events; to shop at supermarkets less, to eat out at restaurants less.

Although this does not necessarily mean total spending will ultimately be lower and job opportunities much fewer – people may shift their spending towards, for example, home improvement, streaming services and online

shopping, and they may purchase more domestic goods and fewer imports – it certainly suggests that there could be some significant frictional unemployment as the pattern of demand changes and many existing jobs become redundant. If apprehension about the future leads people to save more rather than spend, any tendency to increased unemployment would be exacerbated.<sup>5</sup>

As Davies (2020) points out, pandemics often speed up social and economic changes which have already started. Attempting to peer into a crystal ball, Resolution Foundation researchers found themselves looking in the rearview mirror: they expect to see the current crisis accelerate some existing trends (Slaughter and Bell 2020). For example, the movement away from the High Street, already well under way, will continue as people will remain cautious about close proximity to others, even if extremes of social distancing are gradually removed. They expect to see low-skilled migration, already inhibited by post-Brexit immigration rules, decline significantly.

On the other hand, one trend which they expect to see reversed is the growth of self-employment. Apart from the threat of many existing small businesses being lost during the lockdown, the damage accompanying this is likely to deter people from branching out on their own in the future, especially as the Chancellor has made it clear that he expects to increase national insurance contributions on the self-employed as a quid pro quo for his package of measures to help them in the current lockdown (Brennan 2020).

#### The Coronavirus Job Retention Scheme

In the short run, the government has acted to relieve employers of a large part of the cost of keeping workers on the payroll when they are not allowed to work. Few employers could pay inactive workers for very long, and without government support would have to make them redundant. The government hopes that maintaining the existing workforce will make it easier and quicker for businesses to switch back to full production when the lockdown ceases, thus making the OBR's predictions more plausible. If workers had been 'let go' in very large numbers, it would take many months to re-engage sufficient staff to get back to pre-lockdown levels of output.

Bear in mind, though, that reduced employment does not map easily to one-to-one increases in unemployment. The economic activity rate – previously at historically high levels – may fall as people retire earlier, stay on in college, or spend more time with children. Early indications from the USA suggest a sharp fall in labour force participation as a result of the crisis (Coibion et al. 2020).

The government has brought in a range of measures to support businesses during this crisis, but the one which is of most relevance here is the CJRS. This enables businesses which cannot provide productive work because of the lockdown to pay employees 80 per cent of their normal pay (up to £2,500 per month, which is approximately average earnings) if they agree to be 'furloughed'. Participants in this scheme are still paid by their employer, with the employer being reimbursed by the government, and have still to pay taxes through PAYE on their (reduced) wages. During a period of furlough, the employees can do no work for their employer (although, subject to some conditions, they may be able to work for some other business, for example fruit picking).

The CJRS was put together hastily, and unsurprisingly it has imperfections. The conditions for its use have had to be changed a number of times, for instance to backdate eligibility and to allow people who have left jobs to be 're-employed' and thus eligible to be furloughed by their previous employer. There are inevitably hard cases where people have been excluded from eligibility, or where the terms of the scheme disadvantage some groups of workers.<sup>7</sup>

The scheme is not unique. It is a special case of a wage subsidy programme, of which there have been many in the past, both in the UK and elsewhere.8 Such schemes have inherent dangers. One is fraud, about which the Chancellor of the Exchequer is said to be concerned (Thomas et al. 2020). There are significant potential opportunities for fraud, for example in claiming for ineligible or non-existent workers, side-payments for 'employers' who declare workers furloughed, and having furloughed workers continuing to work for the employer. All subsidy schemes involve 'deadweight' and 'displacement' costs. The former arise when workers are supported who would be kept on anyway. The latter involve Some businesses being subsidised while others are not, meaning those with furloughed workers survive while others go to the wall and their employees lose their jobs instead. These effects together mean that the cost per job 'saved' is usually much higher than the average cost per job subsidised.

<sup>6</sup> Employers can top up pay to the full amount normally received, though this is voluntary.

<sup>7</sup> For example, hospitality workers whose pay normally includes a substantial proportion of tips can only be paid 80 per cent of their basic pay (Hancock 2020).

<sup>8</sup> For an analysis of one typical scheme, see Boockmann (2015).

The budgetary costs of the scheme are considerable. Originally estimated by the OBR at around £42 billion for a three-month period, the cost has certainly risen considerably since, as the scheme was first extended until the end of June and is now going to continue (in modified form) until October. Many more workers are being furloughed than initially assumed. Although the government gets back perhaps a fifth of the headline cost through income tax and national insurance contributions, and we must always bear in mind that the alternative to the CJRS is big increases in Universal Credit payments, it is difficult to see that the government could contemplate an indefinite extension of this scheme.

The Treasury has at least recognised this (HM Treasury 2020). On 29 May the Chancellor confirmed that the level of government grant provided through the job retention scheme will be slowly tapered, with employers expected to pay employers NICs and pension contributions from August, 10 per cent of wages in September, and 20 per cent of wages in October, before the scheme is ended at the end of that month. And from July, businesses will be able to bring furloughed employees back part time.

These changes move the UK scheme closer to the German equivalent, which was employed effectively to deal with the effects of the financial crisis over a decade ago and focuses on short-time working or *kurzarbeit* (Look 2020). The government pays 60 per cent of normal pay but, crucially, does not require workers to be completely detached from the firm as the UK scheme has done. Employees receive normal pay for the time they are working, while the rest of their normal working week is paid for by a government-run insurance fund. This makes it easier for businesses to reopen gradually, and it would keep employees in touch with their employers in a way which the CJRS initially deliberately discouraged.

The changes to the UK scheme are also consistent with the likely timeline for the lifting of the official lockdown, which should allow non-essential retail to start to reopen in June and leisure and hospitality by the autumn. But there will inevitably be some job losses and in many cases the CJRS is only delaying the inevitable. The longer that workers are furloughed, the less likely it is that their jobs will realistically be available to return to as more and more companies become zombie businesses as markets are lost and demand and supply conditions inexorably shift. Even in 'normal' conditions jobs disappear all the time. A recent study shows that in 2017-18 some 951,915 jobs were lost as businesses closed, while a further 1,307,640 jobs disappeared as surviving firms reduced headcount (Hart and Prashar 2019).

Fortunately, start-ups and existing businesses increased jobs by a larger amount, meaning the number of jobs overall increased by 389,439. No government can freeze employment patterns by fiat, and extended attempts to do so are likely to inhibit the necessary creative destruction process and movement of workers from job to job.

One of the subtler problems created by the design of the CJRS is the 'moral hazard' introduced by in effect insuring employees against job loss. For some, perhaps many workers, being guaranteed 80 per cent may be an acceptable substitute for normal pay – particularly when travel and other costs of going to work no longer apply. They are safe from infection at home, whereas going back to work would mean little increase in income for the greater health risk attendant on rejoining the outside world.

The government has done a good job in convincing people of the danger of Covid-19; now persuading risk-averse and thoroughly scared people to go back to work while there is no vaccine and no proven treatment for the disease is likely to prove difficult. We have already seen unions representing rail workers and teachers demanding that various health conditions be met before going back to work — conditions which the government may not be able to meet on any reasonable timescale (Riley and Robinson 2020; Weale 2020).

## Decluttering labour market regulation, starting with minimum wage legislation

In planning for emerging from lockdown, we need to recognise that millions of jobs may have been lost and thousands of businesses destroyed when the support of the CJRS and other government schemes is removed. The UK economy will be like a country emerging from a devastating war, with old production facilities lost and networks destroyed.

This does not necessarily mean that the state must take on massive new responsibilities to plan and order business. Arguably this was the mistake made by Britain after World War II. Instead, we could look to the example of Western Germany, which unleashed the forces of the market under the influence of Ludwig Erhard and his fellow ordoliberals, and within a few years had reconstructed a prosperous capitalist order (Henderson n.d.).

The current government has already recognised that regulations which industry could tolerate in pre-coronavirus days are inappropriate in the

situation we now find ourselves in. It has, for example, suspended gender pay gap reporting and is allowing construction sites to work longer. Many other rules could be reconsidered: planning rules which mandate complicated processes for changing the use of high street buildings, occupational rules which reduce flexibility (Shackleton 2017) and a host of other employment mandates and prohibitions which act to limit job opportunities.

One key example is minimum wage legislation. The March 2020 Budget not only confirmed a large planned rise in the over-25 National Living Wage (and above-inflation increases in the other four minimum wage rates) from 1 April, but also announced a new remit to the Low Pay Commission (LPC), requiring it to raise the NLW rate to reach 66 per cent of national median hourly earnings by 2024, one of the highest rates in the world.

Note that total employer costs rise by more than the headline figure for employees enrolled in pension schemes (for a full-time NLW employee this would be 3 per cent of the extra earnings) and there are extra employer National insurance Contributions (13.8 per cent of the pay increase for a full-timer). Together these mean that total employer costs of the National Living Wage increased by marginally over 7.2 per cent rather than the headline increase to employees. Some employees may, incidentally, get a smaller increase in net pay if in-work benefits are reduced, thus increasing the size of the notorious 'wedge' between employee gains and employer costs.

It is the effect on smaller businesses which is particularly concerning. Evidence from the last annual report of the LPC (2020)suggests that smaller outfits (examples cited include hairdressers and convenience retailers) are particularly hit by these big pay hikes. Facing considerable competition, it is difficult for them to push up prices, so adjustment comes from reductions in profits (already low in these sectors), work intensification and cutting back on investment. These expedients can only go so far before businesses collapse. In the current climate employment is likely to fall off a shelf when a big rise in employer costs meets steeply falling consumer demand (even if lockdown is gradually modified) in low-paying sectors such as hotels and food.

Even in the generally buoyant labour market prior to the coronavirus outbreak, sectors with a high proportion of workers on the NLW grew employment very slowly, if at all, as the Low Pay Commission notes.

These big increases in minimum wages will raise employer costs disproportionately in poorer regions of the country. The proportion of workers on minimum wages is far higher in some parts of the country than others: it is 12.8 per cent in the North East, 12.1 per cent in Yorkshire and Humber, 12.1 per cent in Wales; but only 5.3 per cent in London (ibid.) In some of the poor seaside and former industrial towns mentioned earlier, a quarter or more of workers may be paid at the statutory minimum. They are at great risk of joblessness.

Economists, including those at the LPC, focus on the 'bite' of the NLW – its relation to median earnings – as a factor in the risk of pricing the low-paid out of jobs. The bite varies considerably from area to area, as Table 2 shows (these figures differ slightly from those used by the LPC, but the pattern remains the same). The projected trajectory to 2024 will mean that in some parts of the country it will approach 75 per cent. By this time, too, the NLW is scheduled to apply to those 21 and over, not just to the 25-plus age group as at present.

Table 2: The National Living Wage as a percentage of median hourly pay excluding overtime, April 2019

UK	0.62
North East	0.68
North West	0.66
Yorks and Humber	0.68
East Midlands	0.68
West Midlands	0.66
East	0.63
London	0.46
South East	0.59
South West	0.66

Source: Authors' calculations, from the Annual Survey of Hours and Earnings.

The Chancellor has further boxed himself in on this issue by quoting a projected hourly rate of £10.50 for 2024, based on what the OBR thought median hourly earnings would be in four years' time. However, the OBR's figures are based on pre-pandemic modelling. If median hourly earnings do not rise as projected – they will probably fall – the government either has to slow the growth of the NLW so it doesn't reach the projected £10.50, or stick to the politically-determined time path and increase the 'bite' still further.

It would be ironic if higher unemployment resulting from such preprogrammed wage hikes offsets Budget measures intended to boost investment and support jobs in poorer regions.

It is unlikely that the government will revoke the new minimum wage rates now they have come into force. However, the chair of the Low Pay Commission has warned that an 'emergency brake' included in the government's plans will need to be activated if, as expected, unemployment rises sharply (Partington 2020). This would involve the LPC advising that the target and/or the timeframe should be reviewed.

A rethink could probably go beyond this (Shackleton 2018). Minimum wages are a crude and ill-targeted way of raising living standards. Much of the benefit goes to people living in households which are not poor (for example, young people living with their parents), and they can do nothing to relieve poverty for those outside the workforce or working few hours.

While it is unlikely any government is now going to scrap minimum wage laws completely – they remain politically popular – the UK's system has become complicated. Instead of five current rates we could revert to just two – one for 18 to 24-year-olds and one for those aged 25 and over – and simplify the rules so that employers are not constantly being surprised by new employment tribunal or HMRC interpretations. There may, however, be a case for having different rates for different parts of the UK, reflecting the strength or weakness of different regional labour markets. Rates can be set at a level which does not threaten jobs; this was the original mandate of the Low Pay Commission until George Osborne and his successors began to set arbitrary targets.

#### Is it time for a Universal Basic Income?

The Covid-19 crisis has also given fresh impetus to calls for the introduction of a Universal Basic Income (UBI), paid by the government with no meanstesting or requirement to work. Some have argued that it was unfair and unreasonable to expect enough people to stay at home without the guarantee of a comprehensive safety net to protect their incomes. Others have suggested that the crisis has underlined the flaws in the current patchwork of welfare payments and Universal Credit in particular.

Nonetheless, the existing benefits system and the additional support from other measures, notably the CJRS, appear to be succeeding in protecting the large majority of the most vulnerable. It may still be necessary to top up these benefits and provide further hardship funds, but the case against a permanent UBI remains strong.

Supporters of a UBI make a variety of arguments, as discussed further by Davies (2019). Some focus on moral points about social justice and solidarity. Others have been attracted more by the idea of a simpler, and potentially cheaper, replacement for existing benefits. However, most studies have concluded that if a UBI is going to make a real difference to the lives of those who actually need it, the payments would have to be set at such a high level that the scheme would be prohibitively expensive. Consistent with this, practically every trial of UBI in other countries has already been abandoned.

For example, the upfront cost of providing 40 million adults (those of normal working age) in the UK with a basic income of £10,000 a year would be around £400 billion. This would dwarf the £130 billion currently spent on health, or the £65 billion cost of the existing system of tax credits and other welfare payments (OBR 2019). Given this, it is no surprise that most supporters of a UBI duck the question of the rate at which it should be set.

Perhaps even more importantly, introducing a permanent UBI now could encourage many worried people to remain at home indefinitely, slowing economic recovery and creating all sorts of additional social and psychological problems.

#### ... or large increases in public sector pay?

It has also been suggested that now is the time for large increases in public sector pay, both to recognise the contributions made by 'key workers' during the crisis and to support the subsequent recovery by raising the incomes of low-paid employees (TUC 2020).

However, there are many 'key workers' in the private sector too, and it is people in the private sector who have borne the brunt of the pay cuts and job losses during this crisis. What's more, average public sector pay and benefits are typically higher than in the private sector.

Large across-the-board increases in public sector pay might have the positive knock-on effect (as some would see it) of encouraging private sector firms to increase wages to maintain differentials. But this would run into the same objection as that raised earlier in the context of increases in the National Living Wage. With the unemployment rate potentially heading for 10 per cent, now could actually be the *worst* time to consider adding further to labour costs.

Instead, it could make more sense to lower the cost of employing people, or to boost the spending power of all low-income households, regardless of the sector they work in, by cutting taxes and easing the burden of regulation. One way to rebuild a prosperous economy that benefits everybody, especially those 'left behind', is to restore full employment, rather than pricing workers out of a job or disincentivising them from seeking work.

### Should we worry about behaviour in financial markets?

It is understandable that some are on the lookout for villains to blame in this time of national crisis. Social media activists have demanded that no public money be used to furlough workers employed by Richard Branson, Philip Green, Victoria Beckham and other prominent entrepreneurs, who should keep on paying them out of their personal wealth. But in a free society we cannot force people to run down their wealth in such an arbitrary way. The losers could be the employees in question, who could end up on Universal Credit with a much lower income than they could get on the CJRS.

City 'fat cats' who are 'profiting from the misery of others' have also been excoriated. Critics have rounded on four main targets:

- Companies receiving emergency support from the government but who might still be considering paying dividends or buying back their own shares.
- Investment managers who have looked to take advantage of lower valuations to buy shares or make cheap acquisitions.
- 'Short sellers' who have profited directly from falling asset prices.
- Credit rating agencies who have downgraded vulnerable companies and countries during the crisis, potentially increasing their costs of borrowing.

#### Should dividend payments be banned?

It does seem reasonable to ask whether firms with enough spare cash to return some of it to their shareholders really need state help in the first place. Labour's new Shadow Chancellor, Anneliese Dodds, has called for a moratorium on dividend payouts and share buybacks for those companies that have benefited from government support (Dodds 2020).

Ms Dodds cited the precedent set by Denmark, where firms applying for an extension of state aid must now commit not to pay dividends or make share buybacks in 2020 and 2021 (Skydsgaard 2020). UK banks have already agreed with the Bank of England that they will not pay any new dividends until the end of 2020 (Bank of England 2020).

In reality, this may be a moot point, as many large companies are already likely to want to preserve cash. However, extending an outright ban to all companies receiving government support – and for an additional year – may be going too far.

Note first that dividends are an important source of income for pensioners and charities, while share buybacks are a good way to return excess cash that can then be reinvested in other businesses where it can be used more effectively (BEIS 2019). Put another way, if there were some obvious value-enhancing opportunities within the business itself, why would its shareholders not want these to be exploited instead?

The timescale is also important. Now may well not be the time to be paying dividends. But stretching a ban throughout 2021 could mean that companies that have long since exited any emergency government support would be expected to sit on excess cash.

It is worth noting too that some commentators have called for additional conditions to be attached. Ms Dodds has suggested that firms receiving government support must sign up to environmental commitments, such as the 'Science Based Target Initiative' 10 to reduce carbon emissions. This could easily backfire. The more conditions that are attached, the greater the chance that firms decide not to take the cash after all – instead making more employees redundant or closing parts of their business completely.

<sup>9</sup> This was a key message from Deloitte's latest survey of CFOs (Deloitte 2020).

<sup>10</sup> See 'About the Science Based Targets Initiative' (https://sciencebasedtargets.org/about-the-science-based-targets-initiative/).

In any case, if new environmental commitments (for example) are worthwhile, they should arguably be applied to all companies, rather than on a patchwork basis depending on which companies are in trouble. Otherwise the result may simply be that it is the weakest businesses which have needed most support during the Covid-19 crisis which end up being saddled with the biggest costs once the crisis has eased.

In short, a moratorium on dividends and share buybacks might sound good in principle, but it may not be a great idea in practice.

#### Should investment managers buy cheap?

Their rational distaste for the profit motive is particularly clear in much of the popular commentary on financial markets. Perhaps the most extreme example of confected outrage is the criticism of some investment managers for suggesting that the sharp falls in equity markets presented the opportunity to make 'super-normal returns' – by buying the shares of under-valued companies.

This activity may be welcomed, since it helps share prices to recover and provides much-needed finance for businesses. What's more, if investors do end up making a profit, they will pay taxes on these profits in the usual way.

#### Why bans on 'short selling' are a bad idea

When funds are engaged in 'short selling', though, it may take a little more effort to see the bigger picture.

Short selling is essentially a bet that the price of a financial asset will fall. It traditionally involves the short seller borrowing a parcel of shares or bonds from another investor and then selling them on. The original holder will charge a fee for this, which can be substantial.

Later the short seller will repurchase an equivalent number of shares or bonds and return them to the original holder. If their price has fallen in the meantime, the short seller will make a profit (less any fees and other transaction costs incurred). But if the price has risen, the short seller will make a loss.

What's to like about this? Despite its bad reputation, short selling has three wider benefits.

First, it helps to keep the markets liquid. The presence of willing (short) sellers makes purchasing shares or bonds easier for those investors who do want to buy. The original holders (often insurance or pension funds) can also make a handy income from lending out the assets that they own.

Second, the activities of short sellers can provide useful information, for example in identifying companies whose shares or bonds are over-priced. Admittedly, short selling can itself depress prices. But short selling is a potentially expensive and risky activity. In general, short sellers can only make any money if they turn out to be right about the valuation of the asset they are betting against.

Third, the ability to hold short positions allows all sorts of financial institutions, as well as other businesses and individuals, to reduce risk. Indeed, one of many reasons why media headlines about the size of short positions run by particular funds are often misleading is because these shorts are being used to hedge much larger *long* positions, where an investor would gain from a rise in price. (Some short positions must be reported, but most long positions do not.)

Of course, some observers still regard short selling as potentially damaging, especially during a crisis. And some policymakers like to be seen to be responding to these concerns.

A handful of countries and regulators, including a few in the EU, have therefore increased reporting requirement or introduced bans on short selling in the last few weeks. But there is no evidence that this has helped to check the large falls in share prices and these bans are now being lifted.

In the UK, the new Governor of the Bank of England, Andrew Bailey, has limited himself to an appeal to anyone engaged in short selling which might damage the economy (in some unspecified way) to 'just stop' (Bruce 2020). The reality, as the Financial Conduct Authority (FCA) itself has spelt out, is that aggregate *net* short selling is still low as a percentage of total market activity (FCA 2020).

Even if you still believe that short selling is immoral or unethical, almost all the academic evidence suggests that bans on short selling either have no significant impact, or that they make things worse (Beber et al. 2016).

In summary, the onus is on those wanting to ban short selling to make a much stronger case. It would be much better for policymakers to continue to focus on ensuring that anyone speculating against the UK no longer has a good reason to do so.

#### Don't shoot the rating agencies!

On 27March, the credit rating agency Fitch downgraded the UK's sovereign credit rating by one notch, from AA to AA-, citing worries about the UK economy and a jump in government debt. In the event, this had no significant impact on bond prices. But the announcement has revived long-standing concerns about the role of rating agencies during crises, and whether they make things worse.

It is important to understand first that, despite some hyperbolic headlines, Fitch's announcement was never likely to have any significant impact on the UK's cost of borrowing. There was nothing surprising in the agency's statement that might tell investors anything new about the prospects for the UK economy or public finances (see Fitch Ratings 2020). What's more, the UK's revised rating is still comfortably within the most valued category of 'investment grade'.

Nonetheless, the reputation of the agencies had, of course, already been badly damaged by their role in contributing to the global financial crisis, when some had given what turned out to be hopelessly inflated ratings to mortgage-backed securities. It has also been argued that the subsequent downgrades of sovereign debt added to the pressure on governments to implement 'austerity', especially in the eurozone.

However, there is a danger here of 'shooting the messenger'. Rating agencies are only doing their job – as they see it – of providing an independent and objective assessment of the creditworthiness of particular borrowers. It would also be odd if a rating agency did not take a view on the relative riskiness of lending to companies badly affected by the crisis, such as airlines, hotel chains, or high street retailers. After all, other market participants are doing so as well. Rating agencies are often just playing catch up with movements in share prices, corporate bond spreads, or credit default swaps.

There is a separate debate about whether rating agencies are any good at their job. But most investors do not have the resources or expertise to do their own due diligence, and there is some value in independent benchmarks, particularly for less well-known borrowers. Beyond that, rating agencies no longer have the influence that many seem to assume.

#### Will there be a surge in takeovers?

It has also been asked whether there will be a surge in takeovers, especially by overseas investors -and whether we should care if there is.

However, this is unlikely to happen any time soon. Global Foreign Direct Investment (FDI) flows, including mergers and acquisitions (M&A) activity, were already subdued in 2019, reflecting macroeconomic uncertainties and trade tensions. The Covid-19 crisis is obviously a further headwind. The United Nations Conference on Trade and Development has already suggested that FDI could fall by 30 to 40 per cent this year (UNCTAD 2020). This now looks like an underestimate.

Indeed, it seems inevitable that deals will be put on hold or take longer to complete. The due diligence on cross-border deals will be made more difficult by travel restrictions, and some deals that are close to completion may be stalled by the triggering of material adverse change (MAC) clauses.

However, to the extent that some international buyers do take advantage of the crisis to acquire distressed UK companies, it is not obvious that this should be any more of a concern than domestic funds buying cheaply. The exception, of course, would be if there are genuine concerns about issues such as national security. But otherwise, additional restrictions on international capital flows are usually little more than crude protectionism.

#### How will this end?

To conclude, what might all this mean for the future of the UK economy?Perhaps this can best be answered as a series of questions.

#### Is the current degree of state intervention justified?

The government made the exceptional decision to shut down large parts of the market economy to save many thousands of lives. This provided a rationale for exceptional policy responses to protect businesses and jobs, and thus prevent a temporary economic shock from becoming a prolonged depression. The additional support offered to businesses in the form of cheap loans and job subsidies are a good example.

What's more, there are transaction costs of sound good businesses going bankrupt because of a government edict to close temporarily. As Booth (2020) has noted, it may be extremely inefficient if perfectly good businesses go bust and then must re-enter the market or have their places in the market taken by other businesses when the crisis is over. The coronavirus crisis is also not an event that most businesses could have been expected to insure against, so the usual 'moral hazard' arguments may not apply.

#### Is this a failure of 'capitalism'?

Given how popular it is to blame 'capitalism' for all the world's other ills, from wars to climate change, it is no surprise that some have been quick to pin the current crisis on its failures too. Many have also used the need for unprecedented intervention as evidence that the state should play a much bigger part in normal times as well.

However, what we are seeing now is an example – albeit an extreme one – of the job that the state has always been expected to do, even by classical liberal sympathisers. Even fierce critics of the 'nanny state' would agree that public health issues of this kind cannot be left entirely to markets. The risk of a great many deaths from coronavirus is a textbook example of serious negative externalities that can only be dealt with by collective action (or alternatively, acquiring 'herd immunity' could be seen as a 'public good').

What's more, the new economic measures are designed to be temporary. At some point, the restrictions to protect public health can be lifted and the normal functioning of markets can be restored. Wage subsidies could then no longer be needed, loan schemes could be wound down, and so on.

#### Is this 'socialism' by the back door?

The massive increase in state intervention has opened the 'Overton window' of policies which are considered mainstream even further to the Left. However, the measures now being taken are not as big a change to the capitalist model as some might like to think. For example, additional government spending is still being channelled through the markets, as far as possible. It is still private businesses that are employing people under the job retention scheme, even if the state is picking up most of the wage bill. Similarly, while the government and the Bank of England have provided additional cheap finance and loan guarantees, it is still private businesses that are doing most of the lending, borrowing, and spending, rather than the state.

The unprecedented nature of this crisis is reflected in other policy measures too, such as deregulation, that presumably those on the Left would not like to see in more normal times. A good example here is the relaxation of the usual limits on working hours in order to help delivery drivers cope with exceptional demand.

But we could go further – in the opposite direction. The health emergency has arguably demonstrated many of the benefits of capitalism.

Relatively wealthy liberal economies have had the resources to strengthen their safety nets in times of crisis. It is private businesses that are competing to come up with solutions to particular needs – from online delivery companies to those working on creating a vaccine. In the meantime, it is

the most flexible and decentralised healthcare systems, such as those in Germany, that appear to be coping the best.

Above all, we have seen numerous examples of how private businesses have been willing to work together and cooperate in the wider public interest. These examples demonstrate that free-market capitalism and the profit motive are perfectly compatible with socially responsible behaviour. And in many cases, the state hasn't had to do anything – other than get out of the way.

#### Is this the end of globalisation?

This is unlikely. There is broad agreement that freer trade has brought huge social and economic benefits and helped to lift hundreds of millions of people – if not billions – out of poverty worldwide.

Of course, there are many critics of globalisation too. But it's far from obvious that the coronavirus crisis has shed any new light on their concerns. It certainly seems odd to worry about the reliance on cross-border supply chains when social distancing means that you cannot even walk to the local shops. But as Niemietz (2020) has pointed out, cross-border supply chains have held up relatively well.

It has been suggested that the delocalisation of production has compounded shortages of basic medical equipment and medicines in some countries. However, it seems more likely that this crisis would have overwhelmed any country, even if all its goods and services were usually supplied locally. International trade at least allows countries in need to access supplies from others that do have the capacity to increase output quickly.

Finally, there are dangers from a lurch towards protectionism. It is obviously true that globalisation – or, more accurately, global travel – has helped to spread Covid-19. As Davies (2020) has noted, certain features of many contemporary societies, including the degree of international integration, mean that a pandemic is more likely now and will have wider and more damaging results, if not contained, than was the case half a century ago.

However, globalisation has also increased the resources available to deal with a crisis. It could well be inadvisable to undermine the benefits of international trade and travel just in case this might help to reduce the costs of a future pandemic.

#### What will the 'new normal' eventually look like?

Perhaps remarkably like the 'old normal'. The practicalities of social distancing will have relatively long-lasting impacts in some sectors, notably leisure and hospitality. Some people will be reluctant to holiday abroad, eat out, or go to cinemas, concerts and major sporting events. Nonetheless, consumer tastes are unlikely to change significantly and most people will still want to go back to spending on whatever goods and services they enjoyed before the crisis, as soon as they are able and feel safe to do so. Otherwise, this crisis may simply accelerate trends that were already well-established, such as increases in online shopping, more flexible working practices, and automation.

#### Do we need a major stimulus package?

Probably not. It is likely that the Chancellor will want to respond to the crisis with an 'emergency budget', perhaps in July. There may a case for bringing forward some infrastructure spending, as long as the projects chosen already represented value for money. This might also be a good time to increase investment in skills training specifically to tackle the problem of frictional unemployment.

However, the emphasis could also be on measures that help the supply side, including targeted tax cuts and deregulation, rather than 'creating jobs' or stimulating demand. The gradual easing of the lockdown and a recovery in consumer and business confidence could be sufficient to kickstart the economy, without the need for further state intervention.

#### References

Arnold, M. (2020) Over 30m workers in Europe turn to state for wage support. *Financial Times*, 28 April (https://www.ft.com/content/3e68bb70-1b17-4fd3-82f5-dfa4ea7454a2?segmentId=bf7fa2fd-67ee-cdfa-8261-b2a3edbdf916).

Bank of England (2020a) HM Treasury and Bank of England announce temporary extension to Ways and Means facility. Press release. London: Bank of England (https://www.bankofengland.co.uk/-/media/boe/files/news/2020/april/hmt-and-boe-announce-temporary-extension-to-ways-and-means-facility.pdf).

Bank of England (2020b) Our response to Coronavirus (Covid-19). London: Bank of England (https://www.bankofengland.co.uk/coronavirus).

BBC News (2020) Coronavirus: Up to fifth of UK workers 'could be off sick at same time'. 3 March (https://www.bbc.co.uk/news/uk-51718917).

BCC (2020) BCC Coronavirus Business Impact Tracker: More than 70 per cent of firms surveyed have furloughed staff as scheme goes live. Press release. London: British Chambers of Commerce (https://www.britishchambers.org.uk/news/2020/04/bcc-coronavirus-business-impact-tracker-more-than-70-per-cent-of-firms-surveyed-have-furloughed-staff-as-scheme-goes-live).

Beber, A., Fabbri, D., Pagano, M. and Simonelli, S. (2017) Short-Selling Bans and Bank Stability. SSRN(https://ssrn.com/abstract=2710371).

BEIS (2019) Share Repurchases, Executive Pay and Investment. BEIS Research Paper Number 2019/011. London: Department for Business, Energy and Industrial Strategy (https://assets.publishing.service.gov.uk/

government/uploads/system/uploads/attachment\_data/file/817978/share-repurchases-executive-pay-investment.pdf).

BEIS (2020) Financial support for businesses during coronavirus (COVID-19). London: Department for Business, Energy and Industrial Strategy, with MHCLG and HMRC (https://www.gov.uk/government/collections/financial-support-for-businesses-during-coronavirus-covid-19).

Boockmann, B. (2015) The effects of wage subsidies for older workers. Bonn: IZA World of Labor (https://wol.iza.org/articles/effects-of-wage-subsidies-for-older-workers/long).

Booth, P. (2020) How should we pay for all this extra government spending. IEA blog, 2 April(https://iea.org.uk/how-should-we-pay-for-all-this-extragovernment-spending/).

Boseley, S. (2020) People in their 60s at higher coronavirus risk too, say scientists. *Guardian*, 22 April (https://www.theguardian.com/society/2020/apr/22/people-in-their-60s-at-higher-coronavirus-risk-too-say-scientists).

Brennan, H. (2020) Chancellor Sunak eyes National Insurance hike in return for self-employed bailout. *The Telegraph*, 26 March (https://www.telegraph.co.uk/tax/news/chancellor-sunak-eyes-national-insurance-hike-return-self-employed/).

Bruce, A. (2020) BoE's Bailey: short-sellers who harm UK economy should 'just stop': BBC. Reuters, 18 March (https://www.reuters.com/article/us-health-coronavirus-boe-shortselling/boes-bailey-short-sellers-who-harm-uk-economy-should-just-stop-bbc-idUSKBN2152CM).

Burn-Murdoch, J and Giles, C. (2020) UK suffers second-highest death rate from coronavirus. *Financial Times*, 28 March (https://www.ft.com/content/6b4c784e-c259-4ca4-9a82-648ffde71bf0).

CIPD (2020) Employers call for furlough scheme to be more flexible and extended to September. Press release, 29 April. London: Chartered Institute of Personnel and Development (https://www.cipd.co.uk/about/media/furlough-scheme-flexible).

Coibion, O., Gorodnichenko, Y. and Weber, M. (2020) Labor markets during the Covid-19 crisis: A preliminary view. Bonn: IZA World of Labor (https://wol.iza.org/opinions/labor-markets-during-the-covid-19-crisis-a-preliminary-view).

Correia, S., Luck, S. and Verner, E. (2020) Pandemics Depress the Economy, Public Health Interventions Do Not: Evidence from the 1918 Flu (https://ssrn.com/abstract=3561560).

Davies, S. (2019) Universal Basic Income: Is it a good idea? London: Institute of Economic Affairs.

Davies, S. (2020) *Going Viral*. Covid-19 Briefing No. 1. London: Institute of Economic Affairs.

Deloitte (2020) Crash, slow recovery, lasting change: Deloitte CFO Survey: 2020 Q1. Deloitte Insights. London: Deloitte (https://www2.deloitte.com/uk/en/pages/finance/articles/deloitte-cfo-survey.html).

Dodds, A. (2020) After this crisis, there will be no excuse for any business not to pay its way. *The House*, 24 April (https://www.politicshome.com/thehouse/article/after-this-crisis-there-is-no-excuse-for-any-business-not-to-pay-its-way).

European Commission (2020) Europe's moment: Repair and prepare for the next generation(https://ec.europa.eu/commission/presscorner/detail/ en/IP\_20\_940).

FCA (2020) Statement on UK markets. 23 March. London: Financial Conduct Authority (https://www.fca.org.uk/news/statements/statement-uk-markets).

Fitch Ratings (2020) Fitch Downgrades the UK to 'AA-'; Negative Outlook. 27 March(https://www.fitchratings.com/research/structured-finance/fitch-downgrades-uk-to-aa-negative-outlook-27-03-2020).

Hancock, A. (2020) Hospitality workers hit by service charge exclusion in support scheme. *Financial Times*, 8 April (https://www.ft.com/content/3a3e6e69-3b1e-4a27-bafc-c17bab2c5764).

Hart, M. and Prashar, N. (2019) Job Creation and Destruction in the UK 1998-2018. Warwick and Aston: Enterprise Research Centre (https://www.

enterpriseresearch.ac.uk/wp-content/uploads/2019/03/ERC-Insight.-Job-Creation-and-Destruction-in-the-UK-1998.-2018.pdf).

Henderson, D. (n.d.) German Economic Miracle. The Library of Economics and Liberty. Carmel, IN: Liberty Fund (https://www.bloomberg.com/news/articles/2020-04-03/how-germany-pays-workers-when-their-work-dries-up-quicktake).

HM Treasury (2018) *The Green Book: Central Government Guidance on Appraisal and Evaluation.* London: HM Treasury (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/685903/The\_Green\_Book.pdf).

HM Treasury (2020) Chancellor extends Self-Employment Support Scheme and confirms furlough next steps (https://www.gov.uk/government/news/chancellor-extends-self-employment-support-scheme-and-confirms-furlough-next-steps).

HMRC (2020) Claim for wages through the Coronavirus Job Retention Scheme. London: HMRC (https://www.gov.uk/guidance/claim-for-wages-through-the-coronavirus-job-retention-scheme).

ISER (2020) New analysis of the impact of lockdown on UK jobs. Colchester: University of Essex (https://www.iser.essex.ac.uk/2020/04/18/new-analysis-of-the-impact-of-lockdown-on-uk-jobs).

Jessop, J. (2020) Coronavirus and the Economic Value of Human Life. London: Institute of Economic Affairs.

Jordà, Ö., Singh, S. and Taylor, A. (2020) Longer-Run Economic Consequences of Pandemics. Federal Reserve Bank of San Francisco Working Paper 2020-09 (https://www.frbsf.org/economic-research/files/wp2020-09.pdf).

Joyce, R. and Xu, X. (2020) Sector shutdowns during the coronavirus crisis: which workers are most exposed? Briefing note. London: Institute for Fiscal Studies (https://www.ifs.org.uk/publications/14791).

Kay, J. and King, M. (2020) *Radical Uncertainty*. London: The Bridge Street Press.

Kekst CNC (2020a) UK ready to sacrifice economy to save lives. Press release.London: Kekst CNC(https://www.kekstcnc.com/media/2550/kekst-cnc-research\_uk-ready-to-sacrifice-economy-to-save-lives\_14-april-2020\_final.pdf).

Kekst CNC (2020b) COVID-19 Opinion Tracker. Research report. London: Kekst CNC (https://www.kekstcnc.com/media/2568/kekst-report-16apr2020.pdf).

Kniesner, T. and Viscusi, W. (2019) The Value of a Statistical Life. Forthcoming in *Oxford Research Encyclopedia of Economics and Finance*. Oxford University Press(https://ssrn.com/abstract=3379967 or http://dx.doi.org/10.2139/ssrn.3379967).

Knight, F. (1921) *Risk, Uncertainty, and Profit.* New York: Houghton Mifflin.

Look, C. (2020) Explaining Kurzarbeit, or Saving Jobs the German Way. Bloomberg, 7 April (https://www.bloomberg.com/news/articles/2020-04-03/how-germany-pays-workers-when-their-work-dries-up-quicktake).

LPC (2020) National Minimum Wage: Low Pay Commission Report 2019. London: BEIS (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/856590/LPC\_Report\_2019.pdf).

Matthews, D. (2019) Modern Monetary Theory, explained: A very detailed walkthrough of the big new left economic idea. *Vox*, 16 April (https://www.vox.com/future-perfect/2019/4/16/18251646/modern-monetary-theory-new-moment-explained).

Morris, C. and Reuben, A. (2020) Coronavirus: Why are international comparisons difficult? BBC News, 18 May (https://www.bbc.co.uk/news/52311014).

NHS (2020) COVID-19 Daily Deaths (https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-daily-deaths/).

Niemietz, K. (2020) Ignore the self-publicists – nobody has been 'vindicated' by coronavirus. IEA blog, 20 April (https://iea.org.uk/ignore-the-self-publicists-nobody-has-been-vindicated-by-coronavirus/).

NIESR (2020) Prospects deeply uncertain for the UK economy. Press release, 28 April. London: National Institute of Economic and Social Research (https://www.niesr.ac.uk/media/niesr-press-release-prospects-deeply-uncertain-uk-economy-14238).

OBR (2019) A brief guide to the public finances. London: Office for Budget Responsibility (https://obr.uk/docs/dlm\_uploads/Brief\_guide\_to\_the\_public\_finances\_March\_2019.pdf).

OBR (2020a) Commentary on the OBR coronavirus reference scenario. London: Office for Budget Responsibility (https://cdn.obr.uk/Coronavirus\_reference\_scenario\_commentary.pdf).

OBR (2020b) Public Finances Databank – April 2020. London: Office for Budget Responsibility (https://obr.uk/data/).

OBR (2020c) Coronavirus lockdown to deliver large (but hopefully temporary) shock to the economy and public finances. London: Office for Budget Responsibility (https://obr.uk/hero/coronavirus-lockdown-to-deliver-large-but-hopefully-temporary-shock-to-the-economy-and-public-finances/).

ONS (2020) Coronavirus and employment for those aged 70 years and over in the UK: October 2018 to September 2019 (https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/coronavirusandemploymentforthoseaged70yearsandoverintheuk/october2018toseptember2019).

Partington, R. (2020) Push to end low pay may have to be scrapped, UK government warned. *Guardian*, 31 March (https://www.theguardian.com/money/2020/mar/31/uk-minimum-wage-rise-of-6-to-go-ahead-despite-coronavirus-pay-freeze-call).

Rajgor, D., Lee, M., Archuleta, S. et al. (2020) The many estimates of the COVID-19 fatality rate. *The Lancet, Infectious Diseases*, 27 March (https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30244-9/fulltext).

Riley and Robinson (2020) Will the unions let London get back to work? TfL and rail firms brace for war with hardline bosses as they try to get trains and Tubes back up and running after lockdown. *Daily Mail*, 20 April (https://www.dailymail.co.uk/news/article-8236275/Transport-bosses-brace-battle-unions-try-trains-Tubes-again.html).

Ruhm, C. (2000) Are recessions good for your health? *Quarterly Journal of Economics* 115(2): 617-650 (http://libres.uncg.edu/ir/uncg/f/C\_Ruhm\_Are\_2000.pdf).

Shackleton, J. R. (2017) Conspiracy Against the Public? Occupational regulation in the UK economy. Current Controversies No. 56. London: Institute of Economic Affairs (https://iea.org.uk/publications/conspiracyagainst-the-public-occupational-regulation-in-the-uk-economy/).

Shackleton, J. R. (2018) Restructuring Minimum Wages: Complexity, compliance and a case for reform. Discussion Paper No. 92. London: Institute of Economic Affairs (https://iea.org.uk/publications/restructuring-minimum-wages/).

Shackleton, J. R. (2020) Pass the Remote: Why we can't all work from home. Briefing Paper. London: Institute of Economic Affairs.

Skydsgaard, N. (2020) Denmark blocks firms registered in tax-havens from state aid. Reuters, 20 April (https://www.reuters.com/article/us-health-coronavirus-denmark-idUSKBN2221V8).

Slaughter, H. and Bell, T. (2020) Crystal balls vs rear-view mirrors: The UK labour market after coronavirus. London: Resolution Foundation (https://www.resolutionfoundation.org/publications/crystal-balls-vs-rear-view-mirrors/).

Smith, H. and Garcia, C. (2020) Coronavirus: The towns most economically at risk from coronavirus pandemic. Sky News, 23 April (https://news.sky.com/story/coronavirus-coastal-and-ex-industrial-towns-most-economically-at-risk-11977233).

Thomas, D., Giles, C. and Morris, S. (2020) Nerves jangle as Sunak's job retention scheme gets set to go live. *Financial Times*, 19 April (https://www.ft.com/content/b83817e0-fa5b-43a8-9bf9-e3391760b36f).

Tomlinson, D. (2020) Launching an economic lifeboat: The impact of the Coronavirus Job Retention Scheme. London: Resolution Foundation (https://www.resolutionfoundation.org/publications/launching-an-economic-lifeboat/).

TUC (2020) A better recovery: learning the lessons of the corona crisis to create a fairer, stronger economy. London: Trades Union Congress (https://www.tuc.org.uk/ABetterRecovery).

UNCTAD (2020) Impact of the Covid-19 Pandemic on Global FDI and GVCs. Investment Trends Monitor, March. Geneva: United Nations Conference on Trade and Development (https://unctad.org/en/PublicationsLibrary/diaeiainf2020d3\_en.pdf).

Verity, A. (2020) Banks under fire for coronavirus loan tactics. BBC News, 30 March (https://www.bbc.co.uk/news/business-52043896).

Weale, S. (2020) Older pupils 'should be first' when England's schools reopen. *Guardian*, 21 April (https://www.theguardian.com/education/2020/apr/21/older-pupils-should-be-first-when-englands-schools-reopen).

Weinfass, I. (2020) Bouygues UK sites to reopen. *Construction News*, 20 April (https://www.constructionnews.co.uk/contractors/bouygues/bouygues-uk-sites-to-reopen-20-04-2020/).

Young, T. (2020) Has the government overreacted to the Coronavirus Crisis? *The Critic*, 31 March (https://thecritic.co.uk/has-the-government-over-reacted-to-the-coronavirus-crisis/).

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