Expert Report for the UK Covid-19 Public Inquiry

Module 9 – Economic Response

Economic policy during Covid-19: the challenges, risks and trade-offs

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Author statement

I confirm that this is my own work and that the facts stated in the report are within my own knowledge. I understand my duty to provide independent evidence and have complied with that duty. I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

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Preamble

1. I am an economist with experience and expertise primarily in the microeconomics of public policy, and particular specialisms in labour markets, welfare and tax policy, and economic inequality. Since September 2024 I have been a Deputy Director at Alma Economics, an economics consultancy whose work is primarily focused on informing and improving public policy.

2. The vast majority of my career to date was spent at the Institute for Fiscal Studies (IFS), latterly as a Deputy to the IFS Director. For seven years I ran the IFS's Income, Work and Welfare team and research programme, which conducts most of the IFS' research and policy analysis around labour markets and the welfare system. My career at IFS involved a combination of peer reviewed academic research and policy analysis and commentary. As part of the latter I was a witness before numerous parliamentary select committees on various topics and was also a Specialist Adviser to the House of Lords Economic Affairs Committee during 2022.

3. During the Covid-19 pandemic, as part of my role at IFS I co-authored numerous analyses of the economic impacts of the crisis on different groups of individuals and households, and of the impacts of economic support measures that the government had put in place. This, and much more analysis about the economics of Covid-19 produced by my colleagues at the time, is publicly available at www.ifs.org.uk. In 2023 I also provided expert peer review for the official evaluations of the Coronavirus Job Retention Scheme and the Self-employment Income Support Scheme that were conducted by HMT and HMRC.

4. I have been asked by the UK Covid-19 Inquiry to provide an expert report whose primary focus is on elucidating the key economic issues facing the UK during the Covid-19 pandemic, and the challenges and trade-offs that the economic policy response faced. I do not give a comprehensive and detailed overview, or assessment, of all elements of the actual policy response, although I do discuss specific policies where it helps to illuminate or exemplify a point I am making. In the final section of my report, I outline why it is in fact very difficult to confidently identify the economic impacts – and hence successes or failures – of economic support measures implemented during the pandemic, because it is not clear precisely what would have happened had the UK implemented an alternative approach. However, I also identify some elements of the policy response that I believe were more and less successful, and suggest lessons to be taken forward – though again, this is not intended to serve as a comprehensive evaluation of the economic response to Covid-19.

5. I am grateful to Eric Yang – a colleague at Alma Economics – for research assistance in producing this report.

Topic 1: The nature of the economic shocks caused by Covid-19

6. When discussing the economic shock caused by the Covid-19 pandemic, I consider the combined impact of the pandemic and the public health policy response to it. These two impacts are very difficult to separate, and doing so would be beyond the scope of my report. For example, it is difficult to estimate how much economic activity associated with social contact would have decreased due to voluntary social distancing in the absence of public health restrictions, and how much was due to the restrictions themselves.

7. Economically, the impacts of the Covid-19 pandemic are best described not as a single "shock" but as a set of interrelated shocks with a common cause. Avoidance of social contact (both voluntary and mandated) reduces consumer demand for goods and services that are associated with social contact. A demand reduction alone is an economic shock, and can cause a recession. However, Covid-19 also directly affected the production of goods and services (the "supply side" of the economy) that rely on social contact – including, of course, via mandatory restrictions and lockdown measures, although not limited to these. Illness among the workforce can further inhibit production by reducing the supply of labour. As these factors impacted not just the UK but the whole world, and as international movement was restricted, global supply chains were severely disrupted, further inhibiting domestic supply for many firms that rely on imported inputs (either directly, or indirectly via their own supply chain). Meanwhile, the pandemic created an unusual degree of incentive for adaptation and innovation by households and businesses – in particular, taking steps to organise both consumption and production to reduce social contact.

8. This range of simultaneous impacts on different parts of the workings of the economy made the Covid-19 pandemic unusual relative to other recessions. It also made it particularly complicated for economic policy to respond to because, as I will detail further, the appropriate economic response to different sorts of shocks is different. In broad terms, the multi-faceted nature of the Covid-19 economic shocks meant that: i) the range of responses needed to address the shocks was wide, which, in combination with the sheer magnitude of the crisis, placed an unusual degree of strain on the machinery of government; ii) it was difficult to judge exactly what combination of shocks the UK was facing, and their relative magnitudes, which made the optimal mix of policy responses hard to judge.

9. The overall mix between the supply- and demand- shocks that the economy was facing was one important uncertainty. Responding to a supply-side shock by stimulating demand can be counterproductive: if economic output declines due to an inability to produce goods and services as cheaply as before (as opposed to falls in consumer demand for those goods and services), measures which encourage consumers to spend more money can lead to higher prices and shortages, without the stabilisation of economic output that was hoped for.

10. Much economic activity involves social contact to one degree or another, and the avoidance of this contact (whether voluntary or mandated) was a fundamental reason for the economic crisis in the first place. Hence, the desire to stabilise or stimulate economic activity – typically the government's first priority in a recession – inevitably tended to be at tension, to some extent, with limiting virus spread, which in turn could have feedback effects on the economy.

To know what policy trade-offs the UK was facing, these dynamics would need to be understood in advance.

11. At least two other issues related to the longer-term dynamics of the shock further complicated the policy response:

    11.1. The dynamics and overall length of the pandemic itself were in large part an epidemiological question, and dependent on global factors. This matters because some economic policy responses can become more or less desirable depending on how long they are implemented for, as we shall discuss further; and

    11.2. The long-term economic effects of the shock were uncertain. For example, it was unclear to what extent it would have a persistent or permanent impact on consumer habits (e.g. online shopping) or the labour market (e.g. working from home). This mattered for policy in the immediate term, because it affected the extent to which it was desirable for policy to try to "protect" the previous economic structure (e.g. people's existing jobs) until the pandemic passed.

12. In summary, although every economic crisis is different, in broad terms pandemics are economically distinctive in i) directly disrupting so many domains of life, including both the supply- and demand- sides of the economy, simultaneously; and ii) creating complex dynamic interactions between an economic crisis and a public health crisis. The kind of economic crisis that would likely share the most features with the Covid-19 crisis described above would be another pandemic of similar severity. The fact that this had not occurred in modern times further hampered the government's ability to precisely understand the nature of the shocks and the policy trade-offs that it was facing.

Topic 2: The economic risks posed by Covid-19

13. When there is any economic downturn, there are various key risks. Three important ones, explained further below, will help to structure much of the following discussion:

    13.1. Immediate hardship for individuals and families;

    13.2. Long-term "scarring" effects;

    13.3. A self-perpetuating, prolonged downturn if the macroeconomy is not stabilised.

14. Of course, these risks are related. For example, a prolonged downturn is undesirable because it may extend periods of hardship.

15. These risks are also not exhaustive. Depending on one's value judgements one could add concerns over distribution, or equalities, given that the impacts of economic disruption will invariably differ across people and families (this may apply both to immediate hardship and longer-term scarring effects) – something that was certainly true of the Covid-19 pandemic, as I will discuss further.

Economic hardship and its uneven distribution

16. One economic risk associated with the Covid-19 recession was immediate hardship for individuals as a result of loss of income.

17. The pre-existing structure of the UK tax and welfare system meant that certain kinds of households tended to be highly vulnerable to shocks to their earnings from work. One useful concept to summarise the degree of vulnerability to earnings shocks is the "replacement rate": net (post tax and welfare) income in the event of a job loss as a fraction of net income when in paid work. Low replacement rates signal high exposure to the loss of earnings. Research has shown that many households in the UK have very low replacement rates by international standards - particularly households without dependent children, and those with mid - or high - levels of earnings (Brewer and Murphy, 2023; Hoynes et al., 2024). This is primarily because many households without dependent children are entitled to a relatively minimalist welfare safety net, and because the UK has very little income protection that scales with one's previous level of earnings - a high earner who loses their job is likely entitled to the same support as a low earner with the same demographic characteristics. These broad differences between the UK's welfare system and that of many other high-income countries are now longstanding, although large cuts to welfare entitlements during the austerity of the 2010s further reduced the level of the safety net for many families (Bourquin et al, 2019).

18. Other research has shown that the UK welfare and tax system has, over time, decreasingly prioritised insurance against job loss (Cribb et al, 2017). The growth of income-related in-work support (in particular, via the UK's tax credit system, which grew rapidly from the late 1990s) means that falls in earnings among those who remain in paid work are often cushioned by the government - by triggering higher in-work support levels - to a greater extent than they would have been in the past. Conversely, however, the basic out-of-work welfare safety net has stayed the same in real terms for several decades - meaning it has fallen further and further behind the levels of earnings it is replacing when people lose their job. In this sense, were the UK to experience a recession that involved large-scale job loss, there

was the prospect of households being less well insured against this by the government than in previous recessions.

19. Many of the jobs most affected by social distancing (whether voluntary or mandated) were low-paying jobs. Crudely, in the contemporary service-based UK economy, higher-paying service jobs are relatively likely to be desk-based, "knowledge" economy work that can be done adequately without much physical co-location, while lower-paying service jobs include many personal service professions for which social contact is integral (e.g. catering or hairdressing). It was, therefore, clear from very early on in the crisis that concerns about hardship and inequalities were going to be closely linked. I co-authored an analysis that made this point in the first week of April 2020 (Joyce and Xu, 2020), and several analyses made similar points through the Spring of 2020 (e.g. Pouliakas and Branka, 2020; Sostero et al., 2020).

20. As well as low earners, young workers and workers from some ethnic minorities were far more likely to be at risk of earnings losses than other groups (Joyce and Xu, 2020; Platt and Warwick, 2020). These groups also tend to have relatively little wealth to fall back on in the event of earnings loss and, as discussed, many would find the existing tax and welfare system doing little to insure them. In summary, there was very high potential for increased economic hardship among groups who were already economically vulnerable.

21. In addition, although disproportionate impacts on disabled people did not seem to be the focus of as much research early on in the crisis - as pointed out by Jones - the gap between the employment rates of disabled and non-disabled people increased during 2020 (DWP, 2025). This ran counter to the trend of a generally decreasing disability employment gap in the years prior to the pandemic. As with all the uneven impacts just discussed, this may in part reflect the particular pattern of labour market impacts induced by social distancing, but it may also reflect a general tendency for more economically vulnerable groups to be harder hit by labour market downturns. The same factors that cause a group to have a lower employment rate than others during "normal" economic times will tend to make the employment rate of that group more sensitive to reductions in labour market opportunity. In sum, for a combination of reasons there was good reason to expect that the labour market impacts of Covid-19 would exacerbate inequalities, and this is what happened.

22. There were also reasons to be concerned about severe impacts on people in quite a different socio-economic position. The almost complete lack of earnings-related support within the UK's system of income protection distinguishes it from many other high-income countries. For example, Canada, the Netherlands, Austria, Belgium, Sweden and Denmark all have schemes that will replace more than half (and in some cases a large majority) of previous earnings for a period of time after people become unemployed. For those with more than very modest earnings levels, this is far greater than the degree of insurance provided by the UK's system of flat rate support (Brewer and Murphy, 2023) contains further overview and discussion). In the face of an economic shock as unusually wide-ranging as that associated with Covid-19, this raised the prospect of a cohort of people with mid - or high - earnings who typically have very little interaction with state support systems suddenly becoming reliant on it - and finding that it replaces very little of their lost earnings. They would find that the UK's welfare safety net has not been designed to support the substantial spending commitments (e.g. mortgages) that many of these sorts of households have, calibrated around their previous earnings levels.

Long-term economic scarring

23. Another concern during economic downturns is that they can have negative effects that outlast the downturn itself. "Scarring" is a term often used to describe this phenomenon, and is the term I will adopt here.

24. Scarring can arise in a variety of ways. There is substantial empirical literature suggesting that an individual spell of unemployment can negatively affect the subsequent labour market outcomes of that person, even many years after the initial unemployment event (Davis and von Wachter, 2011). A number of explanations for this have been proposed and examined, including the depreciation of skills while unemployed, perceptions of employers that an unemployment spell is a negative signal, and workers becoming "discouraged" during unemployment and becoming less fully engaged in seeking work.

25. Importantly, it is not necessarily only an unemployment spell per se that may be damaging to an individual's long-term career outcomes, but the fact that the next job they find may be a less good 'match' than the previous one. Hence, even if we could guarantee that anyone who loses their job will immediately start another one, this would not rule out the potential for scarring effects. A useful lens through which to see this is the notion of a career or job ladder (e.g. Moscarini and Postel-Vinay, 2023). People's careers often progress by searching for a job that is more desirable than their current one (perhaps because of the wage level, or because of some other factor), eventually finding such a job, and in this sense climbing the ladder. If their current job is destroyed altogether, they may be able to get back on the ladder immediately, but not necessarily on the same rung as before. In that case, they effectively have to start reclimbing a part of the ladder that they had already climbed - setting them back relative to where they would have been, potentially permanently.

26. This is closely related to the fact that good matches between workers and jobs can take time and effort to establish. The set of employer-employee matches that exist at any moment in time reflect the culmination of hiring effort on the part of firms, and job search effort on the part of workers. These efforts are often iterative with, for example, workers trying multiple jobs, each of which they expect to be better matched to their circumstances or preferences than the previous one. In addition, once workers have spent time doing a certain job with a certain employer, they will often have developed job - or firm - specific skills which do not perfectly transfer to other jobs - meaning that they are effectively more productive in their current job than in alternative jobs (Fujita and Moscarini, 2017; Jacobson, LaLonde and Sullivan, 1993). If this "matching capital" is destroyed - that is, if employer-employee matches are severed because they cannot survive the crisis - then this process has to start over again. This brings a risk that the post-crisis recovery takes longer, and that the post-crisis economy is smaller than it would have been had the crisis not taken place, as resources have to be devoted to additional hiring and rehiring efforts (instead of directly producing goods and services) and as the set of employer-employee matches that are established from scratch are unlikely to be as productive as the ones that existed before the crisis (Moscarini and Postel-Vinay, 2016).

27. Another potential cause of scarring relates to the possibility of firm destruction. Just as the value of productive employer-employee matches can be thought of as "capital" which, all else equal, is costly to destroy, firms as a whole have a range of capital. This includes not simply physical capital like machinery, but anything of value that would take resources to recreate,

such as management practices, knowledge sharing, and other ways of working. Another risk of an economic crisis is that firms which did have a viable, productive long-term future do not survive it, meaning that valuable capital is lost. In such a scenario, when more normal economic conditions return, resource would be diverted to rebuilding that capital instead of being used to produce goods and services with existing capital. This again can mean an economic recovery that is slower, and an economy that is persistently smaller than it would have been.

28. Finally, any lasting health effects of the crisis could also be a source of economic scarring, since people's ability to work, or their productivity in work, can be affected by their health. Recessions in general have been shown to have negative impacts on health, in both the short and long term (Banks et al, 2020 reviews the evidence on this). There was in addition the possibility of more direct long-term health consequences of Covid-19, such as Long Covid, contributing to longer-term economic scarring. Estimates produced during 2022 suggested that Long Covid was still having an impact on the labour market at that point (Waters and Wernham, 2022).

A prolonged downturn

29. Another risk of an economic downturn is that it can become entrenched, due to economic feedback loops that apply when many households and businesses face shocks, and/or heightened uncertainty, at the same time. For example, if many households experience an unexpected loss of income (or an increase in uncertainty about their economic future which makes them want to save more of their money for precautionary reasons), the implications can go beyond the direct effect on the living standards of those households. Firms will find that consumer demand for their products is lower. This may reduce the incomes of the owners of firms (including those who directly or indirectly - e.g. through pension funds - hold shares) and may reduce the firms' demand for labour, which is the primary income source for many working-age people. In turn this means income reductions for a wider set of individuals and households than those hit by the "first-round" set of impacts.

30. These feedback effects are also known as "multiplier effects". They mean that an initial round of income shocks (and/or heightened uncertainty) can then propagate throughout the economy. A key potential goal of government policy during recessions is to help bring back macroeconomic stability more quickly by blunting these effects. This can be done by mitigating some of the income losses (e.g. through the welfare system), or through policies or strategies which help to provide more certainty about the future for households and/or businesses.

31. Mitigation of income losses through the welfare or tax system is something that will happen to some degree without any active policy decision being taken. This is known as "automatic stabilisation". It occurs because the pre-existing welfare and tax system provides some insurance to households against a loss of income. For example, just as some of an increase in income is taken in tax by the government, some of a reduction in income is offset by reduced tax liability. Low-income households are additionally insured by income-related welfare payments. Effectively, both upside and downside income risks are shared between households and the public finances. However, we have already discussed how, particularly for certain groups (those without dependent children, and with mid-to-high earnings levels), the pre-pandemic system did not provide much insurance against earnings loss compared to

many other countries, or, in some respects, compared to the UK in the past. This implies relatively weak automatic stabilisation effects as well – protecting against immediate hardship and the stabilisation of the macroeconomy are closely related. The limitations of the automatic stabilisers already built into the system were another factor pushing towards a large-scale economic policy response to Covid-19.

Topic 3: Risks and trade-offs in economic policy responses

32. In the previous section I outlined the broad categories of economic risk that the Covid-19 pandemic posed. I would argue that policy responses to Covid-19 can, in at least most cases, be traced back to a desire to mitigate those risks. In this section I turn to challenges, risks and trade-offs associated with the policy responses themselves. I focus here on broad challenges that applied across a range of policy options. As a result, the focus of this section is quite conceptual, although I give policy examples to help orientate the reader. This will lead on to Topic 4, in which I will take in turn the major potential forms of policy response and link them back to the challenges and risks laid out here.

Challenges in pursuing macroeconomic stabilisation

33. We have discussed how economic downturns can become self-propagating due to multiplier effects. In light of this, policy action to prop up consumer demand is a means by which government can restore macroeconomic stability more quickly. Policies of this nature include those that seek to increase the amount of money that people have to spend, through monetary policy or through income support measures, and subsidies or tax cuts relating to consumer expenditure. However, the Covid-19 crisis presented several complexities when pursuing policies of this nature.

34. First, as outlined in Topic 1, Covid-19 brought substantial shocks to both the supply- and demand- sides of the economy simultaneously. Judging the appropriate scale of government support aimed at propping up consumer demand, for the purposes of macroeconomic stabilisation, required judging the balance between the supply and demand shocks. To the extent that economic output was in fact constrained by supply-side rather than demand-side factors (e.g. firms unable to obtain the inputs to production they needed, due to disruption to global supply chains), encouraging more consumer demand would not stabilise economic output and could instead result in price rises and/or shortages (Fornaro 2024, Bernanke and Blanchard, 2025).

35. Second, the actual effect on demand of measures designed to prop it up was uncertain, and it was very hard to confidently apply evidence on this question from other (non-pandemic) contexts. A key concept here is referred to by economists as the *marginal propensity to consume* (MPC). The MPC measures the proportion of additional income that a person or household spends on consumption, rather than saving. For example, if a household receives an additional £1,000 in income and chooses to spend £650 of it and save the other £350, then its MPC is 65%. The MPC affects the power and value-for-money of demand stabilisation policies. It determines the extent to which such policies actually stabilise demand - and, conversely, the extent to which the public money used for this purpose will instead be saved by the beneficiaries, and spent later at a time when macroeconomic stabilisation is likely not required.

36. There is a substantial empirical economic literature examining MPCs in various contexts (Parker et al., 2013, Gross et al., 2020). One common finding is that MPCs are higher among less economically well-off groups. This implies that, in general, demand stimulus measures targeted at those groups will result in more additional consumer spending than equivalently-sized measures targeted at other groups (Carroll et al., 2017; Lewis et al., 2024; Fisher et

al., 2020). For this reason there can, at a very broad level, be an overlap between policies which are useful for the purposes of macroeconomic stabilisation and those which mitigate increases in inequalities by supporting more economically vulnerable groups.

37. However, the Covid-19 pandemic was a highly unusual context. The economic uncertainty facing individuals and households was very large, and there is research suggesting that households facing higher levels of financial uncertainty are likely to have lower MPCs because they use additional money to build up savings as a precaution (Jappelli and Pistaferri, 2014). In addition, large fractions of typical household consumption were prohibited altogether by lockdown measures. Beyond that, the appeal of various other forms of consumption may have been affected by the fact that they too involve social contact. It was hence very unclear what MPCs to expect, and to what extent insights from previous research could provide guidance. As the pandemic developed, evidence from data collected in July 2020, in the Understanding Society household survey, suggested that MPCs were very low – about 11% on average (Crossley et al., 2021). If correct this would imply that relatively little money spent for the purpose of demand stabilisation would have achieved that goal.

38. As mentioned, if MPCs are low, this reduces the effectiveness of government efforts to stabilise demand, and instead increases the amount of money that households save. The extra savings will then be spent later, quite possibly at a time when spending is not needed for macroeconomic stabilisation purposes. With worse luck, those extra savings could later be spent at a time when demand stimulation is the opposite of what is needed - as already outlined, in an environment in which inflation is a risk due to supply-side constraints, increased demand simply exacerbates that risk. Although it is difficult to be sure, it is possible that this less fortunate scenario materialised during the next economic crisis - namely the spike in inflation, and in particular energy prices, that began in late-2021 and was substantially worsened after Russia's invasion of Ukraine in 2022.

39. In summary, the case for demand stimulus measures is that they can help to prevent a deeper and more prolonged economic downturn. The risks are that:

    39.1. The policies are costly to the exchequer and yet may be ineffective at stimulating demand during the downturn, if the marginal propensity to consume additional income is low in the uncertain and highly unusual environment of a pandemic.

    39.2. The policies could cause or exacerbate inflation as well as, or instead of, stabilising the economy. This risk would materialise if, at the time when consumers spend the extra money (whether that is during the pandemic or afterwards), supply-side constraints are binding.

    39.3. It was clear in advance that these were risks but, as discussed, there was uncertainty both over how consumer behaviour would respond to demand stimulus during a pandemic and over the relative role of supply- and demand- side constraints during Covid-19.

    39.4. Finally, as discussed in the opening section, many forms of consumer demand entail social contact. The interplay between macroeconomic stabilisation and public health was therefore a complicating factor for economic policy throughout the pandemic - not least because a worsening public health situation could have its own negative feedback effects on the economy, as we saw throughout the pandemic. This issue

was brought into particularly sharp focus by policies which encouraged specific forms of consumption associated with high levels of social contact, such as eating out, as I will come back to in Topic 5; but it also applied quite generally to demand stimulus measures.

The desirability of preserving the pre-pandemic economic structure

40. As explained under Topic 2, one key risk facing the economy was that employer-employee relationships, or whole businesses, that would have a productive long-term future could not survive the crisis. If they could be preserved by economic support measures, this would aid the economic recovery once the public health crisis had passed: the valuable capital that firms have, and the productive employer-employee matches that have been established, could immediately be deployed once again in producing goods and services. If instead these had been destroyed during the crisis, time and resources would be needed to build them back up again, meaning a smaller economy. This was a key source of potential longer-term scarring from the economic disruption caused by the pandemic.

41. Put simply, these considerations point towards policy efforts to help firms, and employer-employee matches, survive the crisis. Policies in this category include grants or loans to businesses negatively affected by Covid-19, and schemes like the UK's Coronavirus Job Retention Scheme which provide government subsidy for the wage costs of employees who worked for a firm at the outset of the pandemic. However, there were potential downsides of preserving the pre-pandemic economic structure in this way. The first of these risks (paragraphs 42 and 43) would apply quite generally in the response to any economic crisis - but was arguably particularly challenging during the Covid-19 pandemic due to the unpredictable dynamics and length of the crisis. The second (paragraph 44) was, I would argue, very distinctive to the Covid-19 pandemic and not a risk that applies to anything like the same extent in a typical recession.

42. A labour market will have a natural, baseline level of *churn* as workers move to better or more productive opportunities (Lazear and McCue, 2018). This happens for a number of reasons: workers and firms do not know exactly how good a match they are for each other in advance, meaning an element of 'shopping around'; the normal course of career progression tends to involve developing skills with experience, and often brings periodic job changes in order to make full use of these developing skills; and the needs or circumstances of both employers and workers can change for various reasons, including family responsibilities. In any of these cases, job-to-job movement is a healthy feature of the labour market. It allows for a better fit between the skills and preferences of workers and the requirements and opportunities offered by their jobs, since they are continually adjusting in order to maintain this alignment. Similarly, the replacement of firms that are less productive by new ones that are more productive is a crucial part of the dynamics of a healthy economy (Anderton et al., 2019).

43. A policy which effectively freezes this process can therefore create or exacerbate mismatch between workers and their jobs. All else being equal, this is a bigger concern in contexts where the natural rate of turnover is highest: for example, among young people in the early stages of their careers most likely to experience career progression (Cominetti et al. 2022). Crucially, it is also a bigger concern if it continues for a long time. Policies focused on preserving the pre-pandemic economic structure would be more desirable during a crisis that lasted three months than one that lasted 18 months - since the amount of natural, healthy

"churn" prevented would be lower in the former case. This made the trade-off particularly difficult to gauge during the Covid-19 pandemic, given uncertainty about the length and dynamics of the public health crisis.

44. A second challenge was, I would argue, even more distinctive to the Covid-19 pandemic. There was unusually high potential for the crisis itself to have material long-term impacts on the structure of the economy. Key examples would include a persistent or permanent shift towards online retail, and working from home (Bick et al., 2020, Aksoy et al., 2022, Quinio, 2023). These kinds of changes would have implications for the post-pandemic economy: the tasks they involve (e.g. delivery driving, or work more easily done remotely), where jobs are located, and the kinds of firms best placed to thrive. Changes of this kind would make preservation of the pre-pandemic structure during the crisis less attractive. It would increase the risk that jobs or businesses that are being preserved will in any case not have a productive future once the crisis has passed; and it would slow the economic recovery, since there would have to be a relatively large amount of re-allocation of labour and capital once the crisis had passed to reflect the new economic reality. Relatedly, policies focused on preservation of the pre-pandemic economic structure could discourage some of the innovation and adaptation - such as supporting the effectiveness of remote working - that would be beneficial during the crisis itself.

45. Were these risks to materialise, then a policy premised upon the preservation of valuable employer-employee matches could actually exacerbate the degree of mismatch that exists between workers and their jobs once the crisis recedes. The longer the policy is in place for, the more likely this is. It is possible that this was one of the driving factors behind the state of the UK labour market after restrictions were lifted in 2021 - a labour market that was characterised by low unemployment rates, hiring difficulties and labour shortages (Causa et al., 2022).

46. In an ideal world, policy would be able to target precisely those firms and jobs that have a viable post-pandemic future, and preserve only those. In reality, of course, this is not possible to do without the benefit of hindsight, so there is a tradeoff - although there are ways that one might try to improve the targeting of policy by using broad proxies for likely future viability. I discuss this further in later sections of the report.

Speed and feasibility versus fine-tuned policy design

47. Given the scale of the crisis and how rapidly it emerged, making support too slow to deliver or too cumbersome to access risked undermining the effectiveness of the response to any of the economic risks that Covid-19 posed. Generally, considerations of speed and feasibility of delivery tended to favour policy options with a less fine-tuned design that were not tightly targeted and for which eligibility was less rigorously assessed.

48. Rapid policy delivery inevitably came with downsides, however. It tended to mean a risk that large amounts of support would be delivered to households or businesses that were not in great need of support. It also increased the prospect of fraud - a risk that was very prominent in the case of business loans, as I shall discuss in Topic 4. This has value-for-money implications, as substantial fractions of the support were not directly helping to achieve the government's key objectives (e.g. avoiding hardship, or helping productive businesses to survive). In addition, to the extent that rapidly assembled policies were targeted, they were

relatively likely to be targeted in a blunt way, which could cause inequity. An example is the "cliff-edge" in the Self-Employment Income Support Scheme (SEISS), which meant that those with incomes less than £50,000 were eligible in full whereas those with incomes even slightly above this level were not eligible for any of it.

49. The exact nature of the trade-offs often depended on the existing administrative apparatus that the government could deploy in relation to the policy in question. In some cases, pre-existing infrastructure meant that a targeted policy was relatively straightforward. For example, Universal Credit provided a ready-made mechanism for supporting many low-income households and for increasing support payments to them during the crisis. However, there was no guarantee that an existing administrative system offered exactly the kind of targeting that the government wanted. For example, while VAT returns would in principle provide useful information about which businesses were struggling the most as a result of the crisis, this would only be the case for businesses large enough to be VAT-registered. As a result, the government did not make use of this information to target business loans.

50. In summary, careful and precise targeting of support tends (all else equal) to make it easier to achieve value-for-money - reducing the proportion of the support given out that does not actually help to achieve the ultimate goals of policy (e.g. helping long-term viable businesses to survive the crisis). However, in a rapidly emerging crisis, designing targeted schemes risked delivering support too late, and this too could mean that the ultimate goals of policy are not achieved (e.g. because businesses have already become insolvent before support arrives). This trade-off is much less severe in cases where existing administrative infrastructure makes targeting more straightforward.

Topic 4: Economic policy options

51. This section sets out the key forms of economic support that were available to the government, and highlights the rationales, downsides, risks and trade-offs associated with them - linking these back to the general principles, challenges and trade-offs introduced under Topics 1-3. As such, this section contains more discussion of specific policies – especially the largest ones, such as the Coronavirus Job Retention Scheme (CJRS) – than previous sections. However, the purpose is not to systematically appraise the government's entire economic response to Covid-19, but to provide the necessary economic background with which such an appraisal can be undertaken. Specific policies are discussed where they are a means to that end.

Integrated income protection and job preservation

52. The **Coronavirus Job Retention Scheme (CJRS),** often colloquially known as the 'furlough' scheme, was the largest package of support for workers provided by the government. It combined several potential policy goals that we have discussed: income protection (i.e. preventing hardship), job preservation (i.e. maintaining existing employer-employee matches), and demand stabilisation (through income protection and reducing income uncertainty). The original form of the CJRS did this by covering 80% of the pre-pandemic earnings of workers placed on furlough by their employer. Later, the scheme was adapted to taper down the government contribution and to subsidise the earnings of workers on reduced, but not zero, hours.

53. A key distinguishing feature of the CJRS is that it combined a job preservation objective with an income protection objective - making one contingent on the other. The focus was specifically on preserving existing jobs, rather than boosting employment per se. This is in contrast to:

    53.1. Policies which pay people who have lost employment, to support their incomes. This is income protection without job preservation, and was the dominant strategy in the US. The UK also had policies of this form, as I cover in the next subsection. However, they were dwarfed by the scale of the CJRS. The short-term effects of this difference in policy emphasis between the UK and US were clearly visible. In the US, there was a sharp fall in the employment rate at the beginning of the crisis followed by a bounceback (as people lost their previous jobs and then found other jobs). In the UK, the trajectory of employment was much smoother, as one would expect given that the CJRS aimed to preserve existing jobs (Pizzinelli and Shibata, 2023).

    53.2. Policies which support people who have lost employment to find other work. There was some track record of success with such policies in the UK, including the Future Jobs Fund (FJF) for under-25s introduced during the late-2000s recession (DWP, 2012). The Kickstart scheme, aimed at unemployed youth claiming Universal Credit, was introduced during the Covid-19 pandemic. However, this was for only a very specific group, and the number of people who actually used the scheme significantly undershot what had been budgeted for (National Audit Office 2021b). This is very likely related to the fact that the large-scale increases in unemployment that were

feared never materialised - which, of course, is itself in part (at least) a consequence of the choice to implement the CJRS.

54. Whether it is desirable to bundle together a job preservation objective with an income protection scheme depends on the difficult-to-judge questions outlined in the previous section. In particular it depends how many employer-employee matches that are productive in the long term are saved through this approach, and how many matches are being maintained that would not optimally have survived (e.g. due to natural career progression, or changes in consumer demand patterns, etc). Depending on the answer to these questions, job preservation could either mean that employers and employees are better matched to each other by the end of the crisis than they would have been, or more poorly matched than they would have been. In the latter case, a combination of income protection and programmes to support people into new jobs looks relatively more attractive than a scheme focused on preserving existing jobs.

55. There are, in principle, ways of trying to weaken the policy trade-off with a job preservation scheme like CJRS. Although it is not feasible to reliably distinguish jobs with a viable long-term future which need support to weather the crisis from other jobs, there are broad proxies that would be predictive of this. In particular, some economic sectors and areas (particularly during periods of locally-varying public health restrictions) were affected more severely than others by social distancing. Indeed, other support policies did distinguish between sectors (e.g. temporary VAT cuts for the hospitality, accommodation and attractions sectors in 2021). In the case of the CJRS, there appear to have been practical constraints on the use of such proxies, with the relevant administrative data not reliably identifying the locations or economic sectors of employers. This is perhaps easier to understand as a barrier in the immediate rush to urgently design a new support scheme, in March 2020, than almost 18 months later towards the end of the life of the CJRS.

56. The fact that steps were not taken to allow more fine-tuned targeting of the scheme over such a long period perhaps reflects the fact that decisions in earlier phases of the crisis were being taken under a presumption that it would not last as long as it did - an issue to which I return in Topic 5. If this is the explanation for why more effort was not undertaken early on to develop the infrastructure to target the CJRS more effectively later, there is another implication: the CJRS was intended to last for less long than it actually did. This is significant because, as discussed, a strategy of job preservation becomes less attractive the longer it is needed for. It raises the question of whether the same strategy would have been chosen had the dynamics of the public health crisis been better predicted at the time of its design.

57. Finally, it was necessary for support delivered through CJRS to be conditional not only on job preservation but also actual reductions in working hours (to zero, in the CJRS' original form). Without this condition, or a way of narrowly targeting the CJRS on businesses or sectors directly affected by lockdown measures, it would have been effectively a universal wage subsidy. Employers would then have had a financial incentive to claim support for any employee, even if the productivity and viability of their job was not affected by the pandemic. The fact that the CJRS had to be conditional on actual reductions in working hours brought both advantages and disadvantages. It had the advantage of supporting people and firms who were, by dint of reductions in economic activity, reducing virus transmission. Because much of the benefit of reduced virus transmission accrues to people other than the individual concerned (an example of what economists call an 'externality'), in the absence of support

of this nature individuals' and firms' incentives are not necessarily aligned with what is socially most desirable: they effectively have to pay a price for protecting others, which means that many will not do so. The CJRS partially mitigated this problem. However, the CJRS also reduced the incentive for adaptation and innovation (e.g. finding "Covid-safe" ways of working) that could otherwise have enabled productive activity to continue with reduced virus transmission. To this extent, there is a risk that it led to more reductions in working hours and economic output than would otherwise have occurred.

Income protection without job preservation

58. Another policy approach is **income protection that is not tied to job preservation**. The UK's existing tax and welfare system already provided an infrastructure for this. Even if the government had made no active decision to change policy, the system of income-related benefits and tax credits would have helped to mitigate income falls for many, as would reductions in tax liability. Indeed, there were huge numbers of new claims for support in the Spring of 2020 as households experiencing falls in income became eligible for this pre-existing support. Between 16th March 2020 and 12th April 2020, there were 1.8 million new claims to Universal Credit (DWP, 2020). That said, as discussed in more detail in Topic 2, the existing UK welfare system provided quite minimalist levels of income protection for some key groups relative to other high-income countries, including those without dependent children and those on mid- to high- earnings.

59. In addition, this existing infrastructure provided a platform for increasing or extending support during the crisis. The government implemented a temporary £20 per week increase in Universal Credit and Working Tax Credit, and an increase in Local Housing Allowance rates for low-income households who rent their accommodation from private landlords. It did not implement an equivalent £20 increase for claimants in receipt of other "legacy benefits" - those benefits gradually being replaced by Universal Credit. Any new claimant who experienced job loss or a sharp fall in income would have to apply to Universal Credit, so this restriction could be viewed as a way of focusing resources on those affected by the pandemic, rather than people already on a low income when the pandemic hit. However, the administrative apparatus available made it infeasible to adjust rates of the legacy benefits at short notice in any case. Administrative constraints also prevented a distinction between new and existing claimants of Universal Credit, meaning that there was in fact a group of people (existing claimants of Universal Credit) who could benefit from the uplift even if their income had not been affected by the pandemic (R (T and Others) v Secretary of State for Work and Pensions, 2022). In summary, while the government appears to have wanted to apply a principled distinction between claimants who were and were not affected by the pandemic, in practice the pattern of additional support provided can be explained with reference only to administrative constraints.

60. Income protection of this nature has a key role to play in preventing hardship. When delivered during an economic downturn, when many people are seeing income falls at the same time, it can also help to stabilise demand and hence the macroeconomy. This is one argument in favour of increased generosity of support during macroeconomic downturns. Another such argument has to do with work incentives. Typically, a key trade-off faced by government is that the more the state insures people against falls in earnings, the more hardship is prevented, but the weaker the financial incentive is for an individual to have increased

earnings. By distorting incentives in this way, the amount of labour that people want to supply may be reduced, with negative effects on the economy as a whole. However, at a time when the demand for labour (rather than the supply of it) is the key constraint on employment, this trade-off is less sharp.

61. In a context where the decision had been taken to have a major income protection scheme that also aimed to preserve jobs (as discussed above), one can think of the additional role of these policies as broadly two-fold. First, because the benefits system takes into account the income of the whole household, and additional living costs such as rents and dependent children, it is much better targeted at the prevention of poverty than a scheme like the CJRS which provides support simply based on an individual's earnings level. In effect, on top of any support delivered via the CJRS, the benefits system provides additional support to those living in a household with low income or high needs. Second, this system could reach key groups that other support measures did not, including those who had lost their job, or those who had begun an employment or self-employment spell too recently to be eligible for other support.

62. The main question for policy-makers was not whether support of this form should be provided, but what the balance should be between income protection measures that are and are not linked to job preservation. This depends on all of the trade-offs discussed in the previous section. Overall, the UK government response only contained a small proportion of income protection that stood separate from job preservation. The CJRS was estimated to cost £70 billion, compared to £8.7 billion in Universal Credit and Working Tax Credit uplifts between 2020 and 2021 (Pope and Hourston, 2022).

Support for businesses

63. I discussed in Topic 2 that the destruction of businesses who had a viable long-term future, but were unable to survive the crisis, was a key economic risk. It would not only expose many people to immediate income falls and hardship - in particular, those employed by such businesses, and those who directly or indirectly own such businesses - but would be a potential source of longer-term economic scarring for the UK. As explained, this latter effect would occur because these businesses tend to have valuable capital that is costly and time-consuming to recreate. Options for supporting businesses included grants, tax reliefs and loans - all of which were used in practice.

64. The core challenge in designing business support is to comprehensively address the problem that the government is trying to solve - saving businesses that are viable in the long term, but need support to get through the crisis - while minimising the amount of public money that supports businesses who were less severely affected by the crisis, or who did not have a viable long-term future.

65. One advantage that the government had in the area of business support is the existence of administrative data that allowed for certain kinds of targeting - in particular, by sector - which were never implemented in the CJRS. Grants and reliefs on business rates (the UK's recurrent tax on the use of properties by businesses, and the broad counterpart to Council Tax for residential property) were focused on the retail, hospitality and leisure sectors - good proxies for the businesses most affected by both mandated and voluntary social distancing. However, not all businesses in these sectors were affected equally by Covid-19, and large

numbers of businesses in other sectors were also affected. A more refined approach to targeting would have used actual up-to-date information on business performance to more precisely identify those businesses most adversely affected. Here again, the coverage of existing administrative systems was a key constraint: while VAT returns would have provided a way of implementing this kind of targeting, this would have left out businesses too small to be registered for VAT.

66. Business loans - a major part of the economic response in practice - have the advantage of directly targeting the underlying problem of a lack of liquidity. Since the aim is to support businesses that do have a viable long-term future but would not be able to survive in the shorter term without support, it is not permanent support that these businesses need. The government can help solve the liquidity problem, while also recouping (some of) the cost later when the economy is recovering and these businesses are productive once more (in practice, the amount of the cost that is recouped depends on the terms of the loans.)

67. The major challenge with implementing a loan scheme in a context like Covid-19 is that the support needs to be delivered quickly in order to be effective in saving businesses, and this is at tension with rigorous checks to provide assurance that the loan will be repaid. Speeding up the delivery of support will mean less time spent on such checks, meaning more likelihood that loans are given to businesses whose long-term outlook is not robust, or to fraudulent applicants.

68. Navigating this trade-off was extremely challenging and this is clearly evident from the timeline of policy. In March 2020 the UK government backed 80% of loan values for the initial Coronavirus Business Interruption Loan Scheme (CBILS) and Coronavirus Larger Business Interruption Loan Scheme (CLBILS). This meant that lenders were exposed to the risk of lending the remaining 20%. The due diligence that they carried out as a result of this exposure led to concerns that money was not being lent sufficiently quickly given the urgency of the situation. As a result, in May 2020 the UK government started to back 100% of loan values under the Bounce Back Loans Scheme (BBLS). This inevitably led to lenders making much more money available at speed, but increased the likelihood of loans being given out that would not be repaid, including due to fraud, as the application process primarily relied on self-certification.

69. This inevitable trade-off was clearly acknowledged and understood at the time (e.g. Department for Business, Energy and Industrial Strategy, 2020), and evidence of the trade-off materialising was soon apparent. In its 2020-21 annual report, BEIS estimated that likely losses due to fraud and error in the Bounce Back Loan Scheme fell within "a range of 8.15% to 14.15%, reflecting £3,615 million to £6,275 million" (BEIS, 2021). This conclusion was reiterated by the National Audit Office (National Audit Office, 2021a). More recent estimates from the Department for Business and Trade put this number at about £2 billion, while recognising that this will only include loss which has been detected as fraud and hence will be an under-estimate (Department for Business and Trade, 2025). Convictions and clawbacks continue at the time of writing.

Demand stimulus

70. All types of economic support measures discussed thus far have a demand stimulus or stabilisation component to them: anything which directly or indirectly prevents or mitigates falls in income has this feature.

71. There are however a set of measures that can target demand stimulus more specifically. Although it is not a focus of my report, this includes monetary policy - and notably the large round of quantitative easing undertaken by the Bank of England during the Covid-19 pandemic. It also includes measures such as subsidies or tax cuts relating to consumer expenditure - economic support measures which only directly benefit people to the extent that they are spending money. These were also used during the crisis, and were targeted on spending within sectors that were most adversely affected by social distancing. In particular, VAT in the hospitality, accommodation and attractions sectors was reduced from 20% to 5% between July 2020 and September 2021, and the Eat Out to Help Out (EOTHO) scheme subsided dining in cafes, pubs and restaurants during August 2020. These schemes can stimulate demand through two broad mechanisms. First, by making specific things cheaper, they can encourage people to buy more of those things than they would have done. Even a general but temporary VAT cut can be thought of in this light, as it can encourage people to buy more things during the period in which it is implemented as opposed to later on. Second, when people buy things that they would have bought anyway, they have more money left over to spend on something else because those things are cheaper. This is akin to being given more income, and is known as an "income effect".

72. The broad trade-offs and risks with these kinds of measures are those covered under Topic 3. First, to the extent that there has been disruption to supply, stimulating demand is not the solution. It can lead to higher prices and/or goods shortages. In the case of a VAT cut, it can also mean that the tax cut is not passed on to consumers in the first place, effectively becoming a form of business support instead (as discussed, for example, in Blundell et al 2020). For example, if a restaurant is unable to serve additional customers in a Covid-safe way, it has no reason to respond to a cut in VAT by reducing the price of a meal. If this attracted more customers it would not be able to serve them - the effect would simply be to forego profit on the meals that it would have sold anyway. As a result, the restaurant would be more likely to keep prices the same and retain the extra income from reduced VAT. Second, the power of a demand stimulus depends on the marginal propensity to consume which, as discussed, was very difficult to gauge during the pandemic. Third, there was generally a trade-off between stimulating demand and social distancing, meaning that one had to consider the complex interplay between the economic crisis and the public health crisis.

73. The potential trade-off between demand stimulus and public health was particularly obvious in some cases - most notably the Eat Out to Help Out scheme. The central objective of this was to stimulate demand for an activity that people had become unaccustomed to, or wary of, precisely because of its public health implications. EOTHO was notable partly in light of the fact that it specifically excluded takeaway food, even from the same businesses who could benefit from the subsidy on eat-in food - despite the fact that a subsidy on takeaways would also have had the demand stimulus effect, without the same level of transmission risk. In turn, this suggests that the key aim of EOTHO was to re-build consumer confidence and habits in eating out - a goal that would be much harder to make sense of if one expected

another wave of Covid-19 and lockdown measures imminently. This links to a wider issue about coordination between economic policy and public health policy, which I return to in the final section.

Topic 5: Assessing the UK government's economic response

74. As stated at the start of this report, I have not been tasked with providing a systematic assessment or evaluation of the UK government's economic response to Covid-19, and that is not what I do here. However, in this final section I briefly discuss i) the general challenges in assessing the impacts of the government's responses and ii) some lessons that I believe can be taken forward either to future pandemics or future economic crises more generally.

Assessing the effectiveness of the response

75. Assessing the effectiveness of the economic policy response to Covid-19 is very challenging. A classic approach to econometric evaluation of economic policy is to compare outcomes, or trends in outcomes, between groups who were treated differently by policy (usually due to eligibility rules). The official evaluations of the CJRS and SEISS schemes (HMRC and HMT, 2023a and 2023b) are evaluations of this sort. They use statistical techniques to, effectively, compare outcomes for groups who "just qualified" for these schemes with those who "just missed out" (e.g. based on the start date of their employment contract in the case of CJRS, and their income level in the case of SEISS). Based on this comparison, for example, the evaluation of the CJRS estimated that, at peak impact in the Spring of 2020, around 4 million more individuals were in employment than would have been the case without the CJRS (HMRC and HMT, 2023a).

76. While this is informative, it is inevitably limited in scope in at least two key respects. First, it will not include as a benefit the "spillover" effects of policy on those who were not directly and specifically targeted by it. As discussed, large-scale economic support measures not only help those eligible for the support, but can have broad macroeconomic effects which benefit those not eligible for support as well. It is precisely these policies which tend to be the most important to evaluate, given their scale and cost.

77. For example, someone who did not receive support through CJRS could still have benefitted from the fact that the economy was more stable than it would have been if millions more of their fellow citizens had lost their jobs at the same time, or if more firms (including potentially their own employer) had been unable to survive the crisis. The question that is really being addressed by an evaluation like that conducted by HMT and HMRC is: "What is the difference between benefitting only indirectly from this measure (via the kinds of macroeconomic or spillover effects just described) and benefitting both indirectly and directly?" In short, in the case of large-scale support measures that likely had significant macroeconomic impacts, there is nobody in the country who was not potentially impacted by the measure. Hence, it is not possible to discern the full economic impact of that measure through comparing the outcomes of one group in that country with another.

78. A second crucial limitation of this kind of evaluation is that it asks whether the policy had an effect relative to no such policy (subject to the limitation that indirect effects are not accounted for, as described). To learn future lessons, it would be more powerful to assess the effects of the policy relative to alternative approaches that are more plausible than the approach of no response at all. Continuing with the example of the CJRS: doing nothing to either protect incomes or support jobs on a large scale was not a plausible response, given the severity of the crisis.

79. The most relevant question for the UK is whether the goals of economic policy during Covid-19 could have been more effectively pursued, or pursued while incurring fewer downsides, with alternative approaches. The empirical challenge in answering that question is that only other countries provide us with direct measurements of what happened when alternative approaches were pursued. Isolating the causal impacts of specific policy differences across countries is notoriously difficult, because so many other factors differ across countries. In the case of Covid-19, key differences include pre-existing sets of institutions and policies, and the dynamics of the Covid-19 disease itself. This severely limits the strength of conclusions that can be reached on the basis of empirical cross-country data about the superiority of one approach over another.

Successes and lessons

80. Navigating the early phase of the economic response was extremely challenging from an operational point of view. With social distancing measures and then lockdown applied, the need for rapid, large-scale economic support was clear, and delivering this rightly took priority over fine-tuned design.

81. That such large-scale support was designed and delivered so quickly was, in my view, impressive. The response was broadly effective in averting the most severe potential outcomes that presented themselves. The CJRS, designed from scratch and implemented at pace, undoubtedly helped to prevent a surge in unemployment. The Universal Credit system also seemed particularly successful during the onset of the crisis, processing a very large volume of claims quickly (DWP, 2020). As discussed in Topic 4, it also allowed for a temporary increase in the level of support to be delivered quickly (for those who were on Universal Credit, and not the 'legacy' benefits that it is replacing, which run on a much less modern infrastructure). This was made possible by reforms to the benefits system implemented in the years preceding the pandemic - including a transition to digital claims. Without this, the UK's system of support would have been less agile, and it seems likely that this would have entailed more hardship for certain families.

82. To draw useful lessons for future crises, a distinction needs to be made. The effectiveness of a policy response will, in part, typically depend on factors that are specific to each crisis and cannot be known at the time when policy decisions have to be made. This does not provide a useful basis for preparing better for a future crisis. On the other hand, if the experience exposes or highlights general policy trade-offs, or policy tools and infrastructure that would have afforded better handling of the crisis, then lessons can be taken forward.

83. In my view, whether support measures remained in place for longer than was ideal is a question that is largely in the former category. With hindsight, for example, it appears that the CJRS remained in place for longer than necessary to prevent large-scale unemployment: unemployment did not rise materially when the scheme ended, which suggests that the downsides of a more aggressive phasing-out could have been minimal. However, concern over the risk of ending support prematurely - of still seeing a material rise in unemployment at the end of a long-lived job preservation strategy - is also understandable. (The long duration of the CJRS did however look more questionable in light of its persistent lack of targeting - an issue that I return to below.)

84. As discussed, the extended duration of the CJRS makes the focus on job preservation throughout the whole pandemic look less attractive than if the public health crisis and associated economic support measures had been more short-lived. There were costs to making support dependent on preserving pre-pandemic jobs, and these costs grew the longer it lasted. Conversely a US-style approach, with a much heavier focus on income protection relative to job preservation, looks more attractive than it would have done if the crisis had lasted less long. However, during the next crisis the dynamics will again be uncertain in advance. This too is an issue over which I am not confident we can learn lessons that will be robust across a plausible range of future crises.

85. There are, however, some lessons that we can be more confident would apply in future. One of these is that **support measures have a tendency to remain in place for a substantial period of time, which may well go beyond the period in which they are needed in order to achieve the original policy goal**. This may be because it is politically more difficult to take something away than to not give it in the first place, or because the risks of withdrawing support too soon could be sharp and obvious, whereas the costs of withdrawing it later than necessary would be less visible and spread across all taxpayers (or a combination of the two). It is possible that this partly explains the long duration of the CJRS. It seems to me especially likely to explain why business rates reliefs introduced for certain sectors in 2020 also remain to this day. This is, of course, not a general argument against introducing support measures in the first place. If support is vital to avert disaster then it should likely be introduced, even if it will be hard to take it away again. However, **support that is difficult to take away once it has achieved its goal is effectively more costly, and this should be factored in when weighing up policy choices in the first place.**

86. **There was a tendency for support measures not only to be retained for a long period, but also to not be refined over that period.** While bluntness and simplicity in the initially designed support package was understandable, given the need for rapid delivery of large-scale support, there was less fine-tuning of policy design over the next 16 months than there could have been. For example, it is not clear that targeting the CJRS by economic sector, or geography, or other indicators of vulnerability to the economic consequences of the pandemic, would have remained administratively infeasible by the Summer of 2021 if preparatory work had been undertaken earlier in the crisis. By the end of its life, this could have made the CJRS a policy that was better targeted at the problem it was trying to solve. I suspect that this lack of innovation is again explained by the fact that economic policy was never looking very far ahead. Had it been known in March 2020 that the CJRS would still be in place in August 2021, work may well have begun in April or May of 2020 to develop infrastructure that would ultimately allow it to be better targeted. **In future, in a crisis of very uncertain duration, I think that work to enable the fine-tuning of economic support should be a priority once measures to deal with the immediate emergency have been delivered.**

87. The lessons just outlined could be relevant to a broad range of future economic crises, including (but not limited to) pandemics. I end with two lessons specific, or at least more specific, to pandemics. As the pandemic evolved, one of the overriding questions became when and how to adjust economic support measures (and, ultimately, to wind them down). As such, the required coordination between health and economic policy became more complex than it had been at the beginning, increasing the risk of misjudgement. Appropriately calibrating economic policy became inextricably intertwined with the epidemiological outlook

and the public health strategy. I am an expert in neither of those, which limits the judgements I am qualified to make.

88. However, **there is evidence that economic policy was not always perfectly in harmony with the best understanding of the public health situation – and, therefore, that more effective coordination between expertise and policy development in these two domains would be a priority for improvement in a future pandemic.** To my mind, although only a relatively small policy compared to many of those implemented, the Eat Out to Help Out scheme provides the clearest-cut indication of this. The fact that this very specifically applied to eating out, and not to takeaway food or drink from exactly the same businesses, suggests that the intention here was not simply to stimulate demand, nor simply to support the hospitality industry. Instead, it was attempting to increase the relative attractiveness of buying from these businesses and then eating at their premises compared to buying the same product from the same businesses and eating it elsewhere (at lower risk of Covid-19 transmission). This suggests that the government thought people needed a nudge in order to rebuild the habit of, or re-acclimatise to, eating out in proximity to others. It would be difficult to make sense of this goal if it were anticipated by those making economic policy that a second Covid-19 wave was likely imminent (unless they had also decided that such a wave would not be accompanied by more prohibitions on eating out – which evidently was not the case).

89. Finally, we have discussed how the design of CJRS was constrained throughout the pandemic by a lack of administrative information that could be used to target it. Every pandemic will have its own epidemiological particulars, and these will have different economic consequences. However, a tendency to have greater effects on economic activity that involves more social contact will apply to many infectious diseases, and a tendency for infection rates and hence economic effects to vary locally seems likely as well. **In a future pandemic of similar seriousness to Covid-19, it is difficult to imagine that more comprehensive administrative data on the sector and locations of businesses would not be useful in tailoring policy.** To the extent that efforts are made to prepare for the economic effects of a future pandemic, this would seem a sensible priority

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