

Discretionary Fiscal Responses to the Covid-19 Pandemic

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Abstract

We analyse discretionary fiscal responses to the Covid-19 pandemic. We distinguish policies for three phases of the pandemic: (1) acute overall disruption, (2) initial recovery phase and (3) the longer term. We analyse measures already taken in (1) and consider measures relevant for (2). We distinguish between lump-sum subsidies, such as deferral of tax payments, which may ease financial constraints, and measures which intentionally affect incentives. We also identify factors that are important given the short-term nature of the measures.

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1. Introduction

This paper analyses discretionary fiscal responses as a result of the Covid-19 pandemic, with a focus on measures directed towards business. By fiscal responses we mean direct adjustments to taxes remitted by business, or the award of subsidies to business. There is already a large and growing literature on governments' broad macroeconomic responses to the Covid-19 crisis.³ We focus instead on specific fiscal responses.

This paper is being written during what we refer to below as Phase 1 of the crisis – a period of acute overall disruption. Governments around the world have already taken a range of fiscal measures, many of them clearly intended only for this phase of the crisis. That leaves open what fiscal measures governments could, and should, implement in subsequent phases of the pandemic.

We make three contributions. First, we categorize the set of prominent discretionary fiscal responses to the crisis according to their relevance in each of the three phases that we describe below. We analyse the policies in two groups: (i) policies that create incentives to change firms' and employees' behaviour, and (ii) policies that provide a lump-sum cash benefit. Specifically, we analyse the advantages and drawbacks of short-time work, and of deferral or cancellation of social security contributions and taxes including value added taxes, corporate income taxes and taxes on business property. Second, we discuss the usefulness of tax measures that governments commonly use in recessions to stimulate the economy. We refer to the existing literature and characteristics of the particular subsidies and taxes to identify which policies are more likely to succeed in achieving their stated aims. Third, we discuss fiscal policy options for the next phase of the crisis. Currently, governments around the world are attempting to tackle imminent problems as they arise. However, businesses need more clarity about what policies may be a few months ahead.

We identify three phases, as follows.⁴

- ***Phase 1 – acute overall disruption***

Phase 1 began in March 2020 for European countries, although the precise timing differed amongst countries. This phase is characterized by severe restrictions on both individuals and businesses as part of the containment of the virus. Many businesses have been required to close. Others have been forced to severely restrict their activities due to the collapse in demand and supply resulting from the lockdown imposed on individuals. Aggregate output is likely to fall severely during this phase. In the UK, for example, the Office for Budget Responsibility (OBR) set out an 'illustrative economic scenario' which assumed that real GDP would fall by 35%, and unemployment would rise by 2 million to 10% in the second quarter of 2020.⁵

- ***Phase 2 – initial recovery***

The timing of the end of these severe restrictions is not yet known. It seems likely that any lifting of restrictions will be gradual – and that they may be reintroduced if necessary. There are obvious constraints on a sharp recovery. First and foremost is the enormous uncertainty with respect to future economic conditions and future restrictions on movement and

³ See, for example, <https://voxeu.org/pages/covid-19-page>.

⁴ This classification draws on, though differs from, that of Bénassy-Quéré et al. (2020).

⁵ Office for Budget Responsibility (2020), 'Commentary on the OBR coronavirus reference scenario', https://cdn.obr.uk/Coronavirus_reference_scenario_commentary.pdf.

distancing. On top of this, most businesses will have seen a dramatic drop in their revenue in Phase 1, in many cases to zero. So the availability of internal funds for re-establishing the business will be limited. External funds will be limited to financing by banks that will be trying to manage non-performing loans or by equity in a market with fewer and more cautious investors. Many businesses simply will not survive Phase 1 – despite substantial government intervention in many countries.

- **Phase 3 – longer term**

The duration of Phase 2 is even more uncertain than the duration of Phase 1. But when it ends, government finances are almost certain to be considerably weaker than they were before the pandemic. Again in the UK, the OBR has assumed that the public-sector net debt would rise to 94.6% of GDP in 2020-21, compared to a prediction before the pandemic of 77.4%. That is very high compared to the pre-financial crisis ratio in 2006-7 of 33.4%. But it is nowhere near the levels seen at the end of World War 2, when the ratio was in excess of 250%. In this paper we do not address the issue of the speed with which the public-sector debt should be reduced in the longer term. For reasons of space we also do not consider more general tax reforms that could be used to raise revenue to support the relaxation of the debt.

In this paper we discuss discretionary fiscal measures by governments for Phases 1 and 2. The key aims of the measures we describe and analyse are to mitigate the impact of the pandemic on the economy in Phase 1 and to promote a speedy recovery in Phase 2. In Phase 1, supply in some sectors has been heavily reduced, or in some cases has disappeared entirely as, for example, the hospitality sector has effectively closed. Moreover, firms supplying clients in the hospitality and similarly affected sectors may also be similarly adversely hit by the supply shock, creating a multiplier effect to the initial shock. Stimulating aggregate demand would have no impact on these sectors and firms in Phase 1 since they face a supply, rather than demand, constraint. However, firms in other sectors may also face demand and supply shocks as an indirect multiplier effect to the reduction in activity in the sectors that are immediately hit.

Guerrieri et al (2020) set out a model in which a supply shock in one sector has a negative impact on other sectors, either through complementarity in demand, or if one sector is part of a supply chain for another. Their analysis supports the use of fiscal policies to stabilize employment and income. Preventing closures of businesses that are facing a supply constraint can not only help those businesses directly, but can also stabilize demand in those businesses more indirectly affected.⁶ In Phase 2, an additional aim of fiscal policies is to incentivize firms to start production again, stimulating demand as well as re-activating the supply chains in the economy. Policies which may be helpful include, for example, reducing the costs of re-hiring employees.

We do not discuss a comprehensive set of potential fiscal measures, but instead focus on key issues and illustrate them with specific measures.⁷ Many of our examples are from the UK, although our analysis is intended to apply more broadly, at least to advanced economies. Before turning to specific measures for each of these phases, the next section outlines some more general issues.

2. General issues

⁶ Monetary policy also has a role in preventing firm exits; see Guerrieri et al (2020).

⁷ The OECD provides an extensive overview of measures at <http://www.oecd.org/tax/tax-policy/> and the IMF has a policy tracker at <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>. Collier et al (2020) provide a complete discussion of these measures.

Some general issues are worth raising at the outset.

Are discretionary fiscal measures required?

Two arguments can be made against discretionary fiscal measures. The first is that governments have sufficient leverage using monetary policy alone. But that seems unlikely and is not a commonly held view. Early monetary policy responses to the crisis have shown that monetary policy alone cannot counter the devastating economic effects of Covid-19 on the real economy.⁸ Fiscal measures have therefore been commonly used in countries hit by the crisis.

The second is that tax revenues provide automatic stabilization.⁹ Automatic stabilizers are movements in public spending and revenues coming from the interaction between existing spending and revenue schedules and economic fluctuations, without discretion or explicit triggers. Tax bases tend to be higher when the economy is doing well, and lower when it is doing badly. This can be true of most taxes, including taxes on spending and income. But the overall impact is small. For example, Auerbach and Feenberg (2000) found that over a long period in the United States, automatic stabilization reduced initial shocks to GDP by only 8%, which is unlikely to be sufficient to respond adequately to the challenges of the COVID 19 pandemic.

This suggests that discretionary measures are required to address the COVID 19 pandemic. Before discussing the options available to governments, we make some more general comments.

Relevant factors in the design of fiscal measures

First, a distinction should be made between measures aimed at providing additional financial resources for a business and measures aimed at influencing specific types of behaviour. This mirrors the normal approach of considering taxes that are lump-sum, which take cash from the taxpayer without changing any incentives at the margin (and so which only have income effects), from more typical taxes that also affect incentives at the margin (which also have substitution effects). From an economic efficiency perspective lump-sum taxes are generally preferred to those which distort incentives, but this is true only if the underlying performance of the economy is efficient. In the context of measures designed to combat the pandemic governments might reasonably try to incentivize behaviour – for example, to stimulate economic activity in Phase 2. Measures which simply cancel or defer tax payments may be less effective at influencing behaviour than those that do affect incentives at the margin.

Second, we assume that Phase 1 will be relatively short term, e.g. 3 to 6 months.¹⁰ That has significant implications for the power of different measures. In the medium to long term, we would need to consider the adjustment of markets to any fiscal measures – specifically we would need to consider the effective incidence of any measures, that is how the measures affect prices. For example, subsidies to continued employment can be expected to affect wages in the medium to long run but not in the short run as they are sticky.¹¹ That suggests that measures aimed at creating incentives for business

⁸ The Bank of England purchased £645 billion of government bonds as its QE programme between 2009 and 2020, including just over £200 billion in March 2020 as part of its response to the covid-19 pandemic.

⁹ Vegh and Valutin (2015) provide evidence of discretionary stabilisation through tax rates. Blanchard and Summers (2020) propose semi-automatic stabilisation, with fiscal policies operating according to pre-set rules.

¹⁰ Of course, this phase may actually turn out to last longer, in which case the comments here should be moderated.

¹¹ See, for example, Le Bihan et al (2012). Klenow and Malin (2010) review evidence of stickiness and find evidence of considerable heterogeneity.

need to be carefully designed: for example, a cut in employers' national insurance would be more effective in supporting business than a cut in employees' national insurance.

Third, uncertainty in Phase 2 may affect all forms of expenditure by businesses. This is likely to be particularly true for longer-term investment, the profitability of which depends on demand well into the future and which has limited reversibility.¹² In this context, governments may consider attempting to stimulate such investment by reducing its cost through more generous tax allowances. There is evidence that such incentives can have an impact on the level of investment. However, the effectiveness of such measures is likely to be more muted in times of greater uncertainty.¹³

Fourth, the impact of the pandemic has very heterogeneous effects on businesses in both Phases 1 and 2. At one extreme, many businesses – such as those in the retail, hospitality and leisure sectors – have had to close at least temporarily in Phase 1. At the other, Phase 1 has been a boom time for delivery companies. This heterogeneity may occur even within apparently similar firms, for example, those with digital platforms – closure of travel and vacations has had a significant impact on the revenues of businesses such as Airbnb, but the demand for physical products from Amazon's online services has soared. Companies that experienced a positive demand shock also had a heterogeneous exposure to the adverse consequences of the crisis on the supply chain side, depending on where and how they source their products.

This heterogeneity has two implications. First, the support required for different businesses in Phases 1 and 2 clearly differs. Second, and related to this, the costs of government support can in principle be reduced if measures are targeted towards businesses most in need. Of course, differentiating policy by types of business is not easy. The cost of implementation and the cost of mistakes could be high. But such targeting should be considered in any policy design.

Finally, in a global economy there are also clearly important international issues. Stimulating demand in one country to support a recovery in Phase 2 may have only weak effects if the rest of the world remains locked down in Phase 1. From an international macroeconomic perspective there would clearly be a benefit from governments coordinating with each other to stimulate simultaneous recoveries. But this may not happen: to the contrary, for at least three decades microeconomic fiscal policy in many countries has been competitive, as governments have competed with each other for limited investment by (multinational) businesses.¹⁴

3. Evaluating key measures introduced in Phase 1

We turn now to a brief discussion of specific fiscal measures that have been implemented by governments around the world. We divide measures into two broad categories, as set out above: those that aim to create incentives to change behaviour and those that simply provide a cash benefit.¹⁵

¹² See, for example, Abel and Eberly (1996), Abel et al (1996), Leahy and Whited (1996), Bloom (2009, 2014), Bloom et al (2007) and Bloom et al (2018).

¹³ See, for example, Bloom (2014), Bloom et al. (2018), Güçeri and Albinowski (2019).

¹⁴ See, for example, Devereux et al. (2008) and Hauptmeier et al (2012) for evidence on the fiscal interaction of neighbouring jurisdictions and Riedel et al (2020) for an analysis of how jurisdictions' own and neighbouring jurisdictions' taxation and spending affects firms' location choices.

¹⁵ Collier et al (2020) also note two other categories of measures; one targeted at supporting health priorities and one aimed at providing legal certainty concerning the application of double tax treaties in a context where the mobility of taxpayers has been significantly limited.

The most important of the measures designed to create incentives to change behaviour are schemes to support short-time work, when an employee works for reduced hours. These schemes typically subsidize the wage costs for workers whose working hours have been reduced or who have been furloughed and thus create an incentive for businesses to maintain employment levels. For example, in the UK, the Coronavirus Job Retention Scheme provides a wage subsidy that covers 80% of the wage costs of furloughed employees, up to £2,500, currently for up to 8 months until October 2020, although employers will be expected to contribute to the cost from July.

Policies to support short-time work are particularly useful in addressing the COVID-19 pandemic in Phases 1 and 2. Short-time work aims to avoid more substantial layoffs which would otherwise be a feature of temporary shocks,¹⁶ such as the pandemic. This means that businesses can maintain their workers and thus their firm-specific human capital, which allows them to recover more quickly after temporary shocks.¹⁷ It also saves firms firing and re-hiring costs, which may be substantial for sectors that have more difficulty in finding suitable staff.¹⁸ These factors ultimately reduce the probability that the business has to close.¹⁹

In addition, short-time work reduces the monetary and physical costs for workers who would otherwise be laid off. Recent estimates suggest that already the monetary costs of being laid off are substantial: being laid-off during a recession decreases lifetime wages by 10% to 15%.²⁰ In addition, short-time work measures may be beneficial for the whole economy as they act as an automatic stabilizer since unemployment benefits are usually below wages and they tend to prevent wage deflation.²¹

The effectiveness of short-time work policies depends on their specific design, and they vary amongst countries. For example, in Denmark workers receive 100% of their wage under short-time work, with the government providing 75% and employers the remaining 25%. In Germany, short-time workers receive 60 to 67% of (net) wages, which is the same as unemployment benefits. Employers are not required to contribute to these payments (but sometimes top them up). The German scheme reduces costs more than for Danish companies; but the Danish system may act more as an automatic stabilizer.²²

There are two possible downsides of short-time work. First, such schemes have substantial fiscal costs. That may partly explain why it is typically only developed countries that tend to have short-time work schemes in place.²³ In the pandemic, the fact that a large set of firms takes advantage of these schemes exacerbates the fiscal cost.²⁴ Second, short-time work measures may limit the incentive to adjust to changed business conditions for businesses affected by temporary shocks and cause an overall loss of output by limiting the re-allocation of employees between companies as well as sectors.²⁵ However,

¹⁶ See Hall (1995).

¹⁷ This is particularly relevant for countries with high standards of employment protection; see Cahuc and Carcillo (2011).

¹⁸ See, for example, Burdett and Wright (1989), van Audenrode (1994) and Kopp and Siegenthaler (2019).

¹⁹ See, for example, Cahuc et al. (2018) and Kopp and Siegenthaler (2019). Work by Giupponi and Landais (2018) questions the effectiveness of short-time work measures in Italy as they only seem to postpone mass layoffs but do not prevent them. Kopp and Siegenthaler (2019) suggest that these different results may reflect the fact that Italy suffered a permanent shock with the financial crisis in 2008.

²⁰ See Davis and von Wachter (2011) for the US and Schmieder et al. (2019) for Germany.

²¹ See Boeri and Bruecker (2011) and Balleer et al. (2016).

²² For a more detailed comparison of short-time work schemes (in Europe), see Schulten and Mueller (2020).

²³ See OECD (2020). There is a much greater prevalence of self-employment in developing countries. There are also special schemes for the self-employed in advanced economies.

²⁴ See press statement of the Ifo-Institute, 'Kurzarbeit in der Industrie steigt drastisch', 30 March 2020.

²⁵ See Cooper et al (2017) and Giupponi and Landais (2018).

given the size of the negative shock in Phase 1 of the pandemic, the issue of reallocating resources seems a second-order issue.

One issue, to which we return below, is the length of the schemes. For example, the UK's Job Retention Scheme was originally scheduled for only three months, though it has since been extended for a one further month, and then another 4 months until the end of October 2020. Initially, it applied only to furloughed workers who did not work for their employers at all. If the scheme simply ended at the end of Phase 1, before a recovery was under way, then there would have been a very strong potential for those furloughed employees to be laid off at that point. Then the benefits of the scheme in terms of businesses keeping their employees would disappear. However, the government has now announced that furloughed workers will be able to return to work part-time in August with employers being asked to pay a percentage towards the salaries of their furloughed staff.

The second main group of measures includes those designed to boost business cash flow, but not necessarily to affect incentives. This includes measures to defer or cancel tax payments and government guarantees for business loans. For example, many countries have introduced measures applying to all businesses which defer payment of VAT and corporation taxes.²⁶ The UK has introduced measures to defer VAT payments and income tax payments for the self-employed and has frozen late payment penalties and interest in case of deferral.²⁷ Other countries have introduced more generous loss relief provisions for taxes on profit.²⁸

Deferral of taxes is clearly beneficial for businesses in the short run but creates potential problems for Phase 2. If the deferral is until the end of Phase 1, then just at the moment at which governments will be hoping for a speedy recovery, with business rehiring workers and undertaking new investment, then those businesses may also face a backlog of tax liabilities, especially if the tax liabilities relate to the period before the pandemic. At that time, the incentives for governments to further defer taxes – or to cancel the liabilities altogether – is likely to be very strong. But if governments recognize this in Phase 1, then the earlier they announce further deferrals or cancellations, the better for business planning and confidence.

Countries have also implemented measures for specific sectors that are believed to be particularly affected by the crisis. For example, the UK has introduced a one-year holiday of business rates – a tax on the value of property used by businesses – for the retail, hospitality and leisure sectors in England. Targeting specific sectors is presumably intended to target a given level of support to businesses which are most in need of support and is therefore potentially an effective way of using limited resources. Of course, identifying such businesses is not a precise science, so at the margins some of those in need may not receive relief²⁹; but that is probably not a sufficient reason not to target at all.

A more specific third category of fiscal measures are directly targeted at supporting health priorities. For example, in the UK, duties and VAT on vital medical imports have been lifted. Similarly, the charge on the use of plastic bags is no longer obligatory for online retailers, which is intended to reduce risks

²⁶ At a more technical level, some countries have also waived or lowered interest rates on late payments, speeded up tax refunds and deferred filing dates. Note that deferring VAT is similar to a temporary subsidy based on the level of sales. This has a smaller value for businesses which are perhaps most affected, which suffer substantial falls in sales.

²⁷ In the case of prepayments of tax, it seems most appropriate for tax administrations to determine these based on a plausible assessment of the likely outturns, rather than being backward looking. This supports cash flow, but it would not lead to subsequent higher payments.

²⁸ More technical measures in the UK, for example, include relaxing the conditions on non-taxable business expenses for employees working from home, which may facilitate the transition to homeworking.

²⁹ See, for example, *The Times*, 4 April 2020 (available at: <https://www.thetimes.co.uk/article/rival-retailers-demand-supermarkets-hand-back-3bn-business-rates-relief-nw255gfji>)

of contamination and speed up deliveries in order to minimize the need for people to visit grocery shops.

4. Priorities for Phase 2

Many factors will be important for any recovery in Phase 2, including re-establishing both supply and demand. International coordination would be useful for both of these, although that is beyond the scope of this paper. In this section we discuss four options for a discretionary fiscal policy that aims to encourage a speedy economic recovery after the initial phase of the pandemic. We focus on domestic issues; there are also clearly important international issues, as noted in Section 2, but we do not discuss them here.³⁰

a. Extension of short-time work, and possibly temporary subsidy for re-employment of workers

A first question that arises is the appropriate role for short-time work in Phase 2. Given the substantial fiscal costs of short-time work, as well as the disincentives it creates for firms to adjust to changed economic conditions and hence the limits it applies to the re-allocation of employees in the economy, its use should be phased out. This should happen automatically to some extent as demand recovers and production and thus working hours increase again.

However, it is unlikely that recovery will happen overnight. It is therefore important that the scheme should not be ended abruptly. Doing so would be likely to lead to many businesses laying-off staff when the scheme ends and would then serve to undermine the whole purpose of the scheme. Beyond that, there are two important dimensions for extending short-time work.

First, the UK scheme initially applied only if the employee did no work for the employing business. That is very restrictive and could have proved harmful if continued into Phase 2. During the early stages of recovery businesses may want to increase activity and use employees again, but not to the full extent of activity before the pandemic. In Phase 2, the scheme should therefore also apply to employees who work reduced hours, as is already the case in many other countries; that is wages for the hours not worked could continue to be subsidized – this would be a form of partial furlough, which would offer businesses the opportunity to recover gradually as demand increases. The UK has recently announced that it will extend its scheme in this way. At the same time, it will require employers to contribute to the cost of the 80% wage payments made under the scheme.

Second, there could also be support to re-employ workers who have been furloughed or laid off, or to hire new workers, in the form of some subsidy to wages for hours that are worked. In the absence of an explicit subsidy, a smaller measure would be a holiday from payroll taxes on the wages of new employees, such as the UK's employers' social security contributions.³¹

As set out briefly in the Introduction, a supply shock in one sector can be magnified through its impact on either the supply (through supply chains) or demand (through available income) in other sectors. Suppose in the early stages of Phase 2 a business faced a continuing supply shock, though perhaps less severe than in Phase 1 – for example, a business in the hospitality sector that is required to maintain social distancing which limits its sales. According to the model of Guerrieri et al (2020), it is

³⁰ There may also be the opportunity to support a 'green' recovery: see the IMF note on 'Greening the Recovery', at <https://www.imf.org/en/Publications/SPROLLs/covid19-special-notes>.

³¹ This is analysed by Guerrieri et al (2020).

plausible that the supply effects in that business's sector are magnified, reducing demand and/or supply in other sectors (e.g. conferences longer than one day cannot take place if hotels are closed). While short-time work schemes mitigate the demand effect, they may be less powerful in re-activating supply chains and thus there is a case for attempting to reducing the initial supply shocks further.

If supply in the sector is strictly limited by social distancing, and the initial business is working to capacity within that framework, then little can be done to limit the effect on that business's supply. But in a more general setting, with weak demand as well, its supply could be strengthened by subsidising its costs. If there is weak demand then it is possible that the business could not justify employing a worker at the full rate of pay. One option would be a wage subsidy, that would boost the supply of that business and of other businesses in its supply chain. Since the worker would then be earning an income beyond that paid by the government either through support for short-time working or through the benefit system, there would be an indirect demand-side effect. Suppose for example, that the government contributed 60% of the wage of an employee for every hour she did not work, and 30% for every hour that she did work. Suppose that the employer paid the additional 70% of the wage only for hours worked. The employer would be willing to do so if the employee was working at a minimum of 70% of her capacity. This would boost supply in businesses receiving such support and would also boost demand more generally.

There would clearly be a considerable cost of subsidising new and re-hired employees, many of whom would be employed even without a wage subsidy – and this suggests that any such support would need to be temporary and probably at most for a few months. But if the rate of subsidy were lower for hours worked than the rate for hours not worked, then there would also be a saving to the government for every hour that the subsidy encouraged a business to employ a furloughed worker. In our example, the government would save 30% of the wage for every additional hour worked by an employee.

The focus on reducing wage costs reflects the fact that wages are likely to be sticky in the short run, which would apply at least at the beginning of Phase 2. In the longer run, any such subsidy would be likely to have some impact on gross wages rates. But this is unlikely to be a significant factor in the short run. For the same reason, reducing taxes nominally borne by workers – income taxes and employees' social security contributions – are likely in the short run to increase their take home pay. That may help in stimulating demand, but only for those who would be employed anyway. It would have only an indirect impact on the demand for labour.

To ensure that firms are not free-riding on the subsidies, additional regulations may need to be introduced – if not already in the place – that allow governments to claw back support if businesses did not continue to employ a worker for a period after the subsidy was withdrawn. There may also need to be restrictions on the use of the funds; for example, a limit on dividend payments and share repurchases. With respect to the level of subsidy, one option would be for support to start at a high level, and then diminish over time. It could also be restricted to wages below a given level – as is the case with the UK scheme which supports wages only up to £2,500 per month.

b. Corporation tax incentives

Movements in profit tend to be strongly procyclical – for example, for given costs, a relatively small decline in revenue could significantly reduce profit. Taxes on profit therefore also tend to be procyclical, and so can play some role as an automatic stabilizer. However, this effect is mitigated by the fact that taxes on profit are typically asymmetric: tax is levied – typically at a single rate – on profit, but there is generally no immediate rebate for losses. An immediate rebate is possible if the loss can be 'carried back' to set against earlier profit, but this is usually highly restricted; beyond that losses

may only be ‘carried forward’ to set against future profit. This means that, in aggregate, revenues from taxes on profit do not decline as much as the underlying profit in downturns. Moving into recovery, taxable profit may remain low as many businesses have unused taxable losses that can be set against new profit.³²

The asymmetric nature of the tax also limits the impact of discretionary corporation tax measures taken in Phase 1 or Phase 2 either with the aim of reducing tax liabilities or with the aim of creating incentives for businesses to invest. The value of discretionary measures also depends on the underlying structure of the corporation tax in each country. Countries with low tax rates and/or tax bases, or a more generous treatment of losses have a smaller leeway to adjust the corporate tax system to provide stimulus. Table 1 presents evidence on the variation of key features of corporation tax systems across countries. The asymmetry also implies that new discretionary corporation tax reliefs would disproportionately help profitable companies or those loss-making companies that either have recently reported corporate profits or expect to switch to a profitable position in the short run. Such reliefs may therefore disadvantage younger firms or R&D- or innovation-intensive companies, which do not currently have taxable profits.

Despite these reservations, we briefly consider three options for discretionary measures for taxes on profit aimed at supporting a speedier recovery, either by providing additional liquidity to companies or by incentivising them to invest and employ new workers.

First, Phase 2 could see further payment deferral. We have already noted the problem that deferrals from Phase 1 may become payable in Phase 2. To prevent this, further deferral may be required. This would provide a lump-sum type cash flow benefit – the benefit of which would increase with past profit.

Second, carry-back provisions could be made more generous. For example, in the UK, losses can normally be carried back to set against profit only in the previous year.³³ In the 2008–10 crisis, the UK introduced a temporary loss carry-back extension to allow carry-backs up to three, instead of one, period earlier. This measure aimed to boost businesses’ cash flows and prevent excessive exits in the 2008–9 global financial crisis. Preliminary analysis by Arulampalam et al. (2020) suggests that such measures may curb company exits during a recession. However, such a measure only helps businesses that had sufficient taxable profit in the earlier years. This would be avoided if governments were prepared to offer cash refunds irrespective of previous or future profit; but they have typically resisted offering rebates to businesses that have not paid tax in earlier years.³⁴

Third, governments could provide more generous allowances for capital expenditure. Such expenditure is typically written off broadly over the life of the asset, but there are many instances where more rapid write-offs are permitted. Immediate write-off of capital expenditure is now permitted in the USA, and also in the UK for the first £1 million of investment for a business (currently only until December 2020). In the UK this easily covers the entire capital expenditure of the vast majority of businesses, and so further support for capital expenditure could only be given if the

³² Devereux and Fuest (2009) estimated that a symmetric tax on profit – one that gave refunds for tax losses – would reduce initial shocks by around 8%, in line with aggregate US evidence. But with restrictions on the use of losses, the tax had no discernible automatic stabilisation effect.

³³ In the US, loss carry-backs were eliminated in the December 2017 TCJA tax reform but reinstated in the CARES Act response to the pandemic in March 2020.

³⁴ Güçeri (2020) examines the impact of the availability of cash returns for R&D expenditure in the UK. A rather different policy could be used to try to gain additional revenue in Phase 3. After the 2008–9 recession, following large financial sector losses, some governments limited the financial sector’s ability to carry the large losses that it incurred during the crisis to future periods.

government decided to offer a ‘super-deduction’ of more than the actual level of expenditure. Such super-deductions already exist for some types of expenditure, notably for research and development.

Recent research has shown that during times of high uncertainty, many companies may prefer to ‘wait and see’ before entering investment projects, even in the presence of generous tax incentives.³⁵ Second, if companies do not have taxable profits (or if they have large losses to carry forward to offset current profits), such incentives are largely ineffective.³⁶ However, any increases in allowances could be made temporary; this would create an incentive to bring forward investment into the period for which the higher allowances was available.³⁷

c. Temporary reduction in the rate of VAT

A reduction in the rate of VAT can in principle be used to stimulate aggregate demand. The effectiveness of such a policy depends on whether the VAT rate cut is passed on to consumers. In competitive markets, the extent of pass-through depends on the demand and supply elasticities in each market. With imperfect competition, the VAT rate cut may over- or under-shift the consumer price.³⁸ If the consumer price falls, then demand can be expected to rise. In this case, a temporary reduction in the rate can have a stronger impact on demand in the short run, since it would induce a lower consumer price when the rate is cut relative to the future period in which it rises again, creating an intertemporal substitution effect in consumption.^{39,40}

A temporary cut in the rate of VAT has been used in previous economic crises to stimulate spending. For example, in 2008–9 the UK implemented a temporary VAT rate cut from 17.5 to 15 percent for 13 months. The empirical evidence from the UK financial crisis suggests that it was on average passed on to consumers, particularly in the early months of implementation.⁴¹ Crossley et al (2014) find that this VAT rate cut increased consumption by 0.4% during the period of the lower rate, but that this was followed by a significant fall in consumption when it ended.⁴²

The lower consumer price resulting from a temporary VAT rate cut could also have a positive income effect on consumption. However, this is likely to be smaller than the intertemporal substitution effect if consumers expect the government to raise the tax rate in the future, although the income effect could be larger for credit-constrained households.⁴³ With the significant economic impact from COVID-

³⁵ See Bloom (2014), Bloom et al. (2018) and Güçeri and Albinowski (2019).

³⁶ See Zwick and Mahon (2017).

³⁷ Bond et al. (1993) and House and Shapiro (2008) find that temporary bonus depreciation schemes, in the UK and US respectively, had large effects on investment.

³⁸ More generally, the extent of pass-through depends on several features of the tax and the reform, including whether it is temporary: see Benedek et al (2020).

³⁹ It may also create arbitrage effect for durables where consumers purchased durable goods earlier during the VAT rate cut period (Crossley et al, 2014). D’Acunto et al (2017) find similar evidence on durables when considering VAT rise in Germany.

⁴⁰ Correia et al (2013) and D’Acunto et al (2018) suggest that an increasing path of consumption tax could be used to stimulate the economy under the zero-rate lower bound of nominal interest rate. A rising path of consumption tax could induce inflation in consumer prices, resulting in real negative interest rate, thereby circumventing the zero-rate lower bound of nominal interest rate.

⁴¹ Crossley et al (2014) find that there is significant pass through to consumer prices – they cannot reject complete pass-through in the initial months of the 2009 UK temporary rate cut.

⁴² Its magnitude depends on the elasticity of intertemporal substitution (Blundell, 2009; Crossley et al 2009), and could be heterogeneous across countries – Cashin and Unayama (2016) find that the elasticity of intertemporal substitution in Japan, estimated to be 0.21, is smaller than that in some analysis for the UK temporary VAT rate cut in which it is considered to be 0.5-1 (Blundell, 2009).

⁴³ See, for example, Blundell (2009) and Crossley et al (2009).

19, it is likely that more households may face binding credit-constraints due to job losses and lack of access to credit. In this case the income effect from a VAT rate cut could be larger than in other periods.⁴⁴

d. Property tax measure for businesses

Recurrent tax on the property of businesses could also be reduced as a targeted measure. In the UK, business rates – a recurrent tax on the value of property occupied by business, based on its assessed rental value – is an important source of tax revenue.⁴⁵ As noted above, in Phase 1, the UK instituted a business rates holiday for the retail, hospitality and leisure sectors, as well as a cash grant to business linked to the business property value.⁴⁶ These measures could provide immediate and timely cash flow benefit for businesses.⁴⁷

There are two benefits of using this approach to provide a cash benefit to businesses. First, it is possible to target specific sectors – for example, those most affected by the social distancing requirements of Covid-19 such as shops, cafes, and restaurants.⁴⁸ However, this advantage should not be overstated since there is considerable heterogeneity even within these sectors. For example, a closed restaurant may continue its business by supplying meals for delivery, whilst a business in the supply chain for a closed hotel may be severely affected even though it is not classified as being in the relevant sector.

Second, in the case of the UK at least, any cash grant applied on the basis of the assessed rental value of properties has the advantage that this value is fixed in advance; it is therefore not subject to manipulation by businesses.

Duranton et al (2011) find evidence that business rates constrain employment growth in the UK, as they discourage businesses from expanding their use of space.⁴⁹ As a business may adjust its use of property during the recovery phase – e.g. to keep a safe distance between its customers – a high level of property tax may hinder employment growth. Tax relief on property tax could therefore contribute to speeding up the recovery process.⁵⁰

5. Conclusions

⁴⁴ The uncertainty under Covid-19 also make it less likely that households could form reasonable expectations of future government policy in the form of Ricardian equivalence.

⁴⁵ For example, in the UK the recurrent non-households property tax (business rates in the UK) constitutes 4.4% of total government revenue in 2017; it constitutes 1.4% of total government revenue in France in 2017 (OECD global revenue statistical database).

⁴⁶ For example, the UK implemented a cash grant (£10–25,000) to businesses through its business rates system, with the amount depending on the value of the property the business occupies.

⁴⁷ It is also unlikely to be absorbed into higher rent in the short run, as commercial rental contracts are usually in longer terms (Duranton et al, 2011).

⁴⁸ Similarly, the location based nature of property tax is relevant for targeting support measure for businesses in regions more affected by Covid-19 within a country. Heterogeneous property tax rate (e.g. in the form of tax relief to different types of business) could also potentially act as a Pigouvian tax that corrects for health externalities incurred by different types of businesses in the economy.

⁴⁹ The analysis in Duranton et al (2011) assumes factor complementarity between labour and space use.

⁵⁰ The differences between residential and non-residential property tax suggest the additional need under Covid-19 to review a property tax system that does not differentiate between them.

Governments have addressed the economic problems arising from the COVID-19 pandemic in a number of ways. One important set of measures has related to discretionary fiscal policy as both taxes and public spending have been adjusted. This paper has set out to provide an overview of the issues that arise in the use of such fiscal policy both in the initial phase of the crisis, and in its immediate aftermath.

We distinguish between measures designed simply to provide a cash benefit to businesses and those that are also intended to create incentives for particular forms of behaviour. In analysing likely responses to the latter, we take a short-term view, which can imply a rather different incidence and effect of fiscal measures due to sticky prices and wages. Perhaps the most significant measure that has been used to date has been the support of short-time work, by subsidising businesses that furlough their employees with a view to re-employing them in the recovery phase of the crisis. An important issue is the extent to which such support should continue into Phase 2 of the crisis; and also whether it should be extended to provide a subsidy not just for hours not worked, but also for hours worked. Providing a subsidy for the cost of returning workers could contribute significantly the conditions for a speedier recovery. We also discuss other options available to support a recovery – including corporation tax incentives, a temporary reduction in the rate of VAT and a holiday from taxes on business property.

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Table 1: Relevant Provisions of the Corporate Tax System across OECD Member Countries

Country	CT rate	Depreciation allowance for Machinery and Equipment	Carry-back of losses	Carry-forward of losses
	Including local taxes	NPV per unit cost	No. of years	No. of years
Australia	30%	0.85	0	No limit
Austria	25%	0.81	0	No limit
Belgium	30%	0.82	0	No limit
Canada	26%	0.30	3	20
Switzerland	25%	0.86	0	7
Chile	27%	0.63	0	No limit
Colombia	33%	0.90	0	12
Czech Republic	19%	0.17	0	5
Germany	31%	0.73	1	No limit
Denmark	22%	0.82	0	No limit
Spain	31%	0.78	0	No limit
Estonia	21%	0.00	0	0
Finland	20%	0.82	0	10
France	32%	0.86	1	No limit
United Kingdom	19%	0.76	1	No limit
Greece	28%	0.73	0	5
Hungary	11%	0.82	0	5
Ireland	13%	0.78	1	No limit
Iceland	20%	0.86	0	10
Israel	23%	0.68	0	No limit
Italy	27%	0.75	0	10
Japan	31%	0.77	1	10
Korea	28%	0.92	1	10
Lithuania	15%	0.90	0	No limit
Latvia	20%	n.a	0	0
Luxembourg	26%	1.25	0	17
Mexico	30%	0.73	0	10
Netherlands	25%	0.96	1	9
Norway	22%	0.78	0	No limit
New Zealand	28%	0.73	0	No limit
Poland	19%	0.73	0	5
Portugal	24%	0.89	0	5
Slovak Republic	21%	0.17	0	4
Slovenia	19%	0.87	0	No limit
Sweden	21%	0.86	0	No limit
Turkey	22%	0.88	0	5
United States	29%	1.31	0	No limit
Source	CBT Tax	CBT Tax	PwC	PwC

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