Fiscal response to the COVID-19 crisis in advanced and emerging market economies†

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Abstract
The fiscal policy response to the COVID-19 crisis was swift and strong, in tandem with monetary policy. Advanced economies (AEs) deployed a much larger fiscal response than emerging market economies (EMEs) throughout the pandemic. This study focuses on the drivers of this divergent fiscal response in the first months of the pandemic. Apart from the fact that EMEs entered the crisis later than AEs, narrower fiscal policy space in EMEs, further reduced by the tightening of their financing conditions in the early stages of the pandemic, constrained their fiscal response. The size and composition of the fiscal response also depended on some structural factors, such as the level of income, the strength of the social safety nets and automatic stabilisers.

1 | INTRODUCTION

The policy reaction to the COVID-19 crisis brought together prompt responses from governments, central banks, and supervisory authorities. Fiscal policy has played a central role given the nature of the shock, a public health emergency with unprecedented real effects. Governments intensified their fiscal policy actions and adopted stringent containment measures in the initial stages of the pandemic, as it spread around the globe (Figure 1, left panel). In advanced economies (AEs), fiscal actions peaked in late March, while emerging market economies (EMEs) responded later.

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This paper analyses the differences in the size and composition of the fiscal response during the first phase of the pandemic. The response was different in terms of size and composition among countries, although the types of measures were broadly similar. The main differences were found between AEs and EMEs, but were also found within each of those groups of countries. The analysis also explores the determinants of the differential response. The initial tightening of the financing conditions in fiscally vulnerable countries, including EMEs, was a major factor explaining these differences. The strength of the safety nets and the role of automatic stabilisers also influenced the size and composition of the fiscal response.

We consider a balanced and representative sample of AEs and EMEs to draw relevant insights. For our analysis below, we consider various subsets of these economies, which are determined by data availability for the measures considered. The period under consideration is mid-February to mid-May 2020.

1.1 Size and composition of the fiscal packages

The goal of the fiscal policy actions was first to buffer the short-term impact of the shock. Governments took a wide array of measures to enhance health care and to support individuals and firms. Central banks and financial regulators complemented these actions with policies that eased financial conditions and enabled the continued flow of credit to the real economy. The combined policy reaction was not only aimed at mitigating the financial turmoil but also at preventing temporary disruptions from inflicting permanent damage on the economy.
The aggregate fiscal packages included both budgetary and non-budgetary measures (a standard classification) as well as subcategories thereof. The response channelled through the budgetary measures had a direct negative effect on the fiscal balance and government debt and increased borrowing needs in the short term. During the COVID-19 turbulence, budgetary measures commonly included higher spending on health services and unemployment benefits, wage subsidies and/or direct transfers, and tax cuts or other forms of relief. Deferrals of payments to governments (e.g. tax payments and social security contributions) only have a temporary effect on the deficit and debt, because they are paid eventually.

The non-budgetary measures may have had little or no upfront impact on the fiscal deficit. They consisted of funding and credit guarantees. Funding included loans by governments (or their financial agencies and state banks) to firms, with a focus on small and medium-sized enterprises (SMEs), and other financial support, including equity injections to strategic firms, such as airlines. While these measures do not have a direct effect on the budget, they represent contingent liabilities; that is, they would have an impact on the public debt if and when they are called in. The fiscal impact of funding measures depends on their design and whether they imply additional borrowing. They could represent an increase in gross public debt or, instead, an increase in contingent liabilities: for example, when loans are channelled through public corporations. Government credit guarantees, including fiscal backing for central bank programmes, are intended to maintain the flow of credit to the economy in a high uncertainty environment (see Baudino, 2020).

The size of the budgetary measures, or “fiscal stimulus”, reached 4.6% of GDP for the G20 countries (Figure 1, centre panel) by mid-May 2020. The magnitudes of funding support and credit guarantees were also substantial: 1.7% and 3.4% of GDP, respectively. Compared with the global financial crisis (GFC), the size of the fiscal stimulus was higher, but the size of non-budgetary measures was smaller, mainly due to the different nature of the two crises.

The size of the fiscal support has been much higher in AEs than EMEs. By mid-May 2020, budgetary measures in AEs reached 8.3% of GDP: 6.6 percentage points higher than in the aftermath of the GFC. In contrast, for EMEs, they represented just 2.0% of GDP, even less than in the GFC. The gap for the funding facilities was narrower: 4% of AEs’ GDP versus 1.3% in EMEs. The contrast was starkest for credit guarantees: 6.6% of GDP in AEs and only 0.4% in EMEs. We also find a large variability among countries in the size and composition of fiscal packages (Figure 1, right panel). While Australia and the United States deployed the largest fiscal stimulus, more than 10% of their GDP, the size of budgetary measures was less than 3% of GDP in Italy, France, and all EMEs, except South Africa. There seems to be some substitutability between budgetary and non-budgetary measures and within non-budgetary measures. Some countries provided large credit guarantees (France and Great Britain, over 10% of GDP; and Italy and Germany, over 20%), while others, like Japan, Korea, Brazil, and India opted for funding facilities. Overall, credit guarantees were used by all AEs, but in EMEs they were small, if used at all.

On top of the mentioned discretionary policies, fiscal automatic stabilisers operated, smoothing the impact on disposable incomes for households and after-tax liquidity for firms. Other things being equal, the larger the size of economic stabilisers, the smaller the required discretionary fiscal response to stabilise a given shock.

On the revenue side, labour tax and social contribution receipts declined sharply. That said, taxes are progressive, so workers with lower incomes may have benefitted less from this effect of tax stabilisers. Corporate tax receipts are also expected to drop dramatically, as they did in the GFC, driven by lower profits of firms. In this context, the deferral or forbearance of taxes and contributions reinforced the impact of the stabilisers during the disruption of the activity.

Unemployment insurance (UI) policies worked as well as automatic stabilisers on the expenditure side. In particular, UI enabled countries to make fiscal transfers to the ones who
needed it the most and had higher marginal propensities to consume. From this perspective, it was an
efficient fiscal policy tool. Moreover, many countries were generous: it was not uncommon for countries
to provide 60% or more of past income to the unemployed, at least during the initial phase of unemploy-
ment, although there was large heterogeneity among countries (Figure 2, centre panel). Some countries
complemented UI with other forms of assistance once UI benefits expired. Given the nature of the coro-
navirus, UI was particularly important, as countries faced a surge in unemployment. Many countries
extended UI coverage after the GFC and created new schemes for shorter working hours
(e.g. Kurzarbeit in Germany). Several countries drew on that experience and used these instruments to
broaden the access and size of the unemployment subsidies during the coronavirus crisis.

There is ample evidence that unemployment insurance schemes, indeed, helped to stabilize
downturns. For example, countries that have had more generous UI benefits tend to have
smaller consumption volatility (Figure 2, right-hand panel). Among US counties, a one-
standard deviation increase (equivalent to a 4%–7% increase) in UI generosity decreased the
effect of adverse shocks by approximately 9% (Di Maggio & Kermani, 2017). At the more micro-
economic level, recent evidence suggests that UI expansions during the GFC in the United
States prevented more than 1.3 million foreclosures and insulated home values from labour
market shocks (Hsu, Matsa, & Melzer, 2018).

2 | DETERMINANTS OF THE FISCAL RESPONSES

2.1 | Pandemic incidence and containment measures

Why were fiscal packages smaller in EMEs than in AEs? One possible reason is the higher prev-
ance of the pandemic in the latter group. The coronavirus affected AEs earlier and more
intensely than EMEs, except for a few Asian EMEs. By mid-May 2020 the number of confirmed cases as a percentage of the population was three times higher in AEs than in EMEs on average (2361 and 735 cases per million inhabitants, respectively).\textsuperscript{4}

A higher prevalence of the pandemic is expected to have more adverse effects on the economy and, hence, to trigger a stronger policy response. Indeed, the size of fiscal packages was significantly larger in countries with a higher incidence of infections (Figure 3, left-hand panel). The result applied to both AEs and EMEs. However, as the left panel in Figure 1 shows, the stringency of the containment measures was very similar in AEs and EMEs. Therefore, the economic impact of the virus could be deeper, and the required fiscal response stronger, in EMEs than what the lower reported prevalence would imply. The stringency index did not exhibit a significant positive correlation with the size of the fiscal packages or the budgetary measures in EMEs. These observations suggest that the more tepid fiscal response in EMEs was not fully explained by the lower incidence of the pandemic.

2.2 | Fiscal policy room

The room for fiscal policy is another important factor. Fiscal deficits and debt levels are going to increase substantially. On top of the pledged and additional fiscal stimulus, the expected recession implies a sizable contribution of the automatic stabilisers to the deterioration of the fiscal accounts. Compared with 2019, Figure 5 shows preliminary forecasts of fiscal deficits and debt to GDP ratios as of April 2020. Fiscal deficits in advanced economies were expected to triple to 11.5\% of GDP and debt ratios to increase more than 18 percentage points of GDP to surpass 100\%. The impact in EMEs was expected to be more limited. Automatic stabilisers are less strong than in advanced economies. However, commodity exporters were expected to take a large hit in fiscal revenues from falling prices and volumes, dragging down their deficits.

International investors were more sensitive to EMEs’ fiscal fundamentals and less tolerant to their debt levels (Reinhart, Rogoff, & Savastano, 2003). Higher financing costs and hampered access to external financing in times of financial stress constrained their fiscal response. The turmoil during the coronavirus crisis was no exception.

Financing costs, measured by 10-year local currency government bond yields at the beginning of 2020, were much higher in EMEs (on average 5.7\%, excluding Argentina) than in AEs (0.7\%).\textsuperscript{5} Figure 3 (right panel) and Figure 4 (left panel) show that fiscal packages were significantly smaller in countries that entered the crisis with higher bond yields and lower sovereign debt ratings.\textsuperscript{6}

Furthermore, fiscal policy in EMEs tends to be procyclical; that is, economic downturns coincide with fiscal contractions. Crucially, the procyclicality is determined by the evolution of financing conditions (see Albe, Kataryniuk, Melguizo, & Orozco, 2016). The coronavirus shock induced a sharp capital retrenchment from EMEs and a tightening of their financing conditions (Hördahl & Shim, 2020). Tougher financing conditions were reflected in the increase of CDS spreads, and they were negatively and significantly correlated with the size of the fiscal packages (Figure 4, right panel). In addition, public finances in some EMEs were largely dependent on commodity export revenues. The dramatic fall in oil demand and prices further limited the fiscal space in oil producing countries: Saudi Arabia, Mexico and Russia deployed relatively small fiscal packages as a response to the crisis (Figure 1, right panel).
Monetary policy can complement fiscal policy in the fight against the pandemic. EMEs had more room to cut policy rates than AEs and they were able to take advantage of it. At the start of 2020, policy rates in EMEs were higher (on average 4.9%, excluding Argentina) than in AEs (0.4%). Even though higher policy rates could indicate higher yields required by investors to compensate a higher risk perception, EMEs managed to loosen monetary policy. They cut policy rates by approximately 114 basis points (excluding Argentina) compared with 40 basis points in AEs.

Monetary policy accommodation also supports fiscal policy by reducing the financing costs of the sovereign. This can be the case even with policy rates close to zero through the implementation of unconventional monetary policies, in particular large-scale purchases of government bonds. With high central bank credibility, this form of quantitative easing (QE) can increase fiscal space by reducing interest rates along the yield curve. AEs actively used asset purchases as a response to the pandemic. As a result, long-term rates fell below their pre-crisis levels in most countries. Some EMEs were venturing into QE, too, but they were being cautious as they treaded uncharted waters. Their asset purchase programmes were intended to support the functioning of the market rather than lowering government funding costs (see Arslan et al., 2020).

In addition to policy space, structural factors of an economy can determine the size and composition of fiscal packages.
Economies with a higher level of development could, in principle, react more forcefully to the shock because their economic and public institutions allow them to mobilise the required resources quickly. However, richer economies also tend to enjoy stronger economic and financial conditions.

**FIGURE 4** Fiscal measures and relation with financing conditions. Total package includes both budgetary (i.e. fiscal stimulus) and non-budgetary (e.g. funding and guarantees) measures as of 13 May 2020. Advanced economies (AEs) include AU, CA, DE, DK, ES, FI, FR, GB, IT, JP, NO, SE, and US. EMEs include AL, AR, BG, BR, CL, CN, EG, ID, IN, K, KR, KZ, MU, MX, NL, RU, SA, SG, TN, TR, and ZA. The line denotes the regression over the whole sample. A solid line denotes a significant linear relationship and a dashed line denotes an insignificant linear relationship. 2 Local currency bonds. As of the beginning of 2020, AR is excluded. 3 Since the beginning of 2020, AR is excluded.

Sources: IMF World Economic Outlook and Fiscal Monitor; Johns Hopkins University; Bloomberg; DataStream; Markit; national data; BIS calculations [Color figure can be viewed at wileyonlinelibrary.com]

**FIGURE 5** Fiscal deficits and debt ratios expected to substantially increase. For the regions, weighted averages based on 2019 GDP and purchasing power parity (PPP) exchange rates. Advanced economies (AEs): AU, CA, DE, ES, FR, GB, IT, JP, and US; EM Asia excluding CN: HK, ID, IN, KR, MY, PH, SG, and TH.; Latin America: AR, BR, CL, CO, MX, and PE; Other EMEs: CZ, HU, PL, RU, SA, TR, and ZA

Sources: IMF Fiscal Monitor April 2020; BIS calculations [Color figure can be viewed at wileyonlinelibrary.com]

Economies with a higher level of development could, in principle, react more forcefully to the shock because their economic and public institutions allow them to mobilise the required resources quickly. However, richer economies also tend to enjoy stronger economic and financial conditions.
institutional mechanisms to effectively buffer unexpected shocks. Deeper financial markets, broader social safety nets, and larger automatic stabilisers would call for a more limited discretionary fiscal response. Figure 6 (left-hand panel) shows the relation between fiscal packages and GDP per capita. For EMEs, the higher the living standards, the larger the fiscal packages, whereas the sign of the relationship flips for AEs.

Institutional safeguards provide some elements to explain this result. Social safety nets are larger in AEs (Figure 6, centre and right panels) and they are usually associated with larger automatic stabilisers, which play a key role in absorbing economic shocks. For AEs with stronger social safety nets, the size of budgetary measures is significantly lower, but this is not the case for EMEs (Figure 6, centre panel). In addition, with larger social buffers that provide protection to households, pensioners and the unemployed, countries can focus their fiscal response relatively more on non-budgetary measures to ensure businesses’ survival and recovery. The right panel in Figure 6 shows a significant correlation for AEs between social safety nets and non-budgetary measures. The relation holds and is significant as well when automatic stabilisers are used as an alternative metric for a smaller sample of 12 OECD countries (OECD, 2019).

3 | CONCLUSION

The fiscal policy reaction to the coronavirus emergency has been quick and powerful at the global level since the onset of the pandemic. However, EME responses were much more limited. By mid-May 2020, the size of EMEs’ budgetary measures represented only one-fifth of that
of their AE counterparts in per GDP terms, and the divergence in the use of non-budgetary measures was even larger. This gap did not close with the further developments of the pandemic.

The smaller incidence of the pandemic and the belated response in some EMEs can only justify a part of this large gap; more important factors are at play. The most relevant is probably the limited fiscal space of EMEs, which has been further constrained by the tightening of their financing conditions due to the pandemic shock.

Fiscal actions have provided much-needed support to households and firms. Fiscal policy has also mitigated the contraction in economic activity. Moreover, the fiscal response is likely to have reduced labour market scarring and corporate insolvencies that would have otherwise occurred due to the pandemic recession. For example, furlough schemes and wage subsidies are likely to have reduced labour market scarring (e.g. in Australia and Germany). Thanks to fiscal measures, corporate insolvencies in 2020 tended to be lower than on average before the pandemic (e.g. in France and Italy). Consequently, scarring was not as large an impediment to the recovery from the pandemic recession as it would have been in the absence of fiscal stimulus. Positive spillovers from fiscal stimulus in major economies is also likely to have supported economic recovery in smaller open economies, especially from fiscal stimulus in the United States.

Some Asian economies managed to control the pandemic relatively early and well (e.g. Australia, China, Japan, and Korea), so that containment measures could be lifted relatively early. Australia and Japan produced some of the strongest fiscal responses at the global level despite the low incidence of infections, as shown in Figure 3 (left panel). The very low financing costs they enjoyed helped in their response. This group of Asian countries is poised to overcome the crisis relatively well, with reduced labour market scarring and corporate insolvencies. Other countries, like Indonesia and India, faced higher financing costs before the onset of the pandemic, which further increased as a consequence of the shock. They ranked towards the bottom of the fiscal policy response, and even relatively below other countries when the financing costs were controlled for (Figures 3 and 4).

Finally, it should be noted that this analysis is a snapshot of the situation in the first months after the pandemic. Fiscal measures have been expanding and adapting to the evolution of the pandemic crisis and are supporting the recovery phase as the containment measures are lifted. The expectation is that EMEs will respond with less stimulus in the recovery phase, also because their fiscal space is more constrained than prior to the crisis. The recent evolution of the fiscal support confirms this expectation.

ENDNOTES

1 Our sample of AEs includes Australia, Canada, Denmark, Finland, France, Germany, Great Britain, Italy, Japan, Norway, Spain, Sweden, and the United States. Our sample of EMEs includes Albania, Argentina, Brazil, Bulgaria, Chile, China, Colombia, the Czech Republic, Egypt, Hong Kong, Hungary, India, Indonesia, Kazakhstan, Korea, Malaysia, Mauritius, Mexico, Peru, the Philippines, Poland, Russia, Saudi Arabia, Singapore, South Africa, Thailand, Tunisia, and Turkey. It would have been ideal to have broader coverage across countries, but some of the data necessary to analyse the determinants of the differential response was not available in some of the countries in the EMEs and developing countries group.

2 See Cavallino and De Fiore (2020) and Arslan, Drehmann, and Hofmann (2020) for central bank responses in AEs and EMEs, respectively, and Drehmann, Farag, Tarashev, and Tsatsaronis (2020) for the role of prudential policies.

3 While some of the measures are not additive, their aggregation in categories and the size of the total packages provides a suitable metric for the fiscal response to the extent that markets and governments also care about
the aggregate amount. The data, categories, and size of the pledged measures are taken from the IMF’s Fiscal Monitor (IMF, 2020a) and an update (IMF, 2020b), with cut-off date 13 May. Tax deferrals are not included in the computation of budgetary measures.

4 The confirmed number of cases depends on the number of tests, the reporting coverage, and communication protocols. Therefore, confirmed cases are far fewer than actual cases across the board. The degree of underreporting is probably higher in less developed economies, and this could explain part of the large difference in incidence between AEs and EMEs.

5 BIS (2020) discusses the effect of the sudden global stop during the pandemic on EMEs’ sovereign bond spreads.

6 The result is robust for long-term rates when controlling for the incidence of the pandemic. Both the size of the fiscal package and of the fiscal stimulus are also significantly smaller for EMEs with lower ratings.

7 The relation remains significant when measuring budgetary and non-budgetary measures as a share of the total fiscal package. Overall, the link between social safety nets and the size and composition of the fiscal packages remains robust after controlling for pandemic incidence and economic and public finance variables.

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