International Review of Applied Economics

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/cira20

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To cite this article: Amrita Saha, Marco Carreras & Evert-Jan Quak (2022): Investigating initial policy responses to COVID-19: evidence across 59 countries, International Review of Applied Economics, DOI: 10.1080/02692171.2022.2130187

To link to this article: https://doi.org/10.1080/02692171.2022.2130187

Published online: 10 Oct 2022.

INTERNATIONAL REVIEW OF APPLIED ECONOMICS
https://doi.org/10.1080/02692171.2022.2130187

Investigating initial policy responses to COVID-19: evidence across 59 countries

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ABSTRACT

We conduct a review of different support measures adopted by 59 countries as an immediate response to the COVID-19 pandemic using an inclusive development lens across five key areas – health and safety, welfare, finance and credit, taxes and fees and structural measures. Using the information that a policy response was announced or implemented immediately, we propose and provide proxy measures for 'access', 'short-term cover' and 'medium- to long-term adequacy' using secondary data. Then, we construct a COVID-19 Response Inclusiveness (CRI) score – to capture the extent of 'inclusiveness' inherent in the support across populations, particularly for the marginalised and more vulnerable. We define and capture inclusion as the equitable distribution of social and economic gains, enhanced well-being and capabilities, with social and political empowerment. Finally, using simple cross-country regressions, we find the initial COVID-19 cases, changes in mobility and Gross Domestic Product (GDP) per capita as key characteristics that were significantly associated with our measured extent of inclusiveness in countries' response packages in the immediate aftermath of the crisis.

ARTICLE HISTORY
Received 16 January 2021
Accepted 24 September 2022

KEYWORDS
COVID-19; policy; access; inclusive

1. Introduction

The coronavirus (COVID-19) pandemic led to severe disruptions around the world. Many governments responded immediately with public health measures to limit the potential spread of the infection. The adverse economic consequences from efforts to contain the spread of the virus proved significant. A range of immediate economic responses were implemented worldwide, to keep the economic fabric alive (Gourinchas 2020; Weder di Mauro 2020), by preserving jobs and businesses – with a noticeable variation across countries (Hale and Webster 2020). It has, however, remained difficult to capture how the various immediate measures adequately supported different populations in the respective countries. The combination of initial support measures adopted continue to have important but different consequences across populations, particularly for

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The authors would like to thank the Commonwealth Secretariat, London, for initial funding that motivated this research; we are grateful to Jodie Thorpe for engaging with the research framework; we also thank Devanik Saha for providing research assistance. Any remaining errors are entirely ours.
This article has been corrected with minor changes. These changes do not impact the academic content of the article.

the marginalised and more vulnerable, and have affected the severity of the economic downturn.

In the early pandemic, key sectors such as retail trade, accommodation and food services, and manufacturing were hardest hit (ILO 2020a). These sectors are marked by a high proportion of informal workers, a prevalence of short-term contracts and workers with limited access to health services and social protection (Lee, SchmidtKlau, and Verick 2020). Furthermore, these groups are ineligible for a majority of support measures that were announced in the immediate aftermath of the pandemic (Saha, Carreras, and Quak 2020). The combination of these facts put such marginalised groups of workers at greater risk of decline into poverty; many are facing considerable challenges in regaining their livelihoods during post-pandemic recovery.

Migrant workers (Gencsu et al. 2020), women in general (Carranza et al. 2020) and women with disabilities (Women Enabled International 2020) have also been impacted disproportionately, working mainly in the most affected sectors in informal settings, and also facing greater forms of discrimination. Particularly, micro and small firms have lower buffers and fewer instruments at their disposal to continue operations and to manage shocks (Carranza et al. 2020). Another vulnerable group includes young people who are either recently out of education or at an early stage in their working life, and are often over-represented in precarious jobs and hard-hit industries (Lee, SchmidtKlau, and Verick 2020). To avoid these groups falling (back) into poverty, support measures need to continue to be targeted, and as such indicators are needed to measure the effectiveness of support and its inclusiveness, which we attempt to do for immediate support measures in this paper.

Support measures were available in the immediate aftermath of the pandemic and after, but access to these measures has remained complex for specific groups, and especially for the more marginalised and vulnerable. The situation has been even more challenging in countries where simple infrastructure such as water, clean sanitation facilities, internet coverage, etc., remains limited at best (Sánchez-Páramo 2020; ECLAC 2020; Quak, Saha and Thorpe 2022). Further responses now in the recovery period will need to cover wider access to measures, providing greater coverage from support measures to reach initially excluded groups.

During the immediate short-term, there was an urgent need to adopt measures that addressed liquidity challenges, reduced layoffs and avoided firm closures and bankruptcies (ILO 2020a). The effectiveness of later and further support measures will be contingent on this earlier mix of swift context-specific policies, implemented with speed and flexibility, as well as measures (if any) that were more medium- to longer term and aimed to focus on building resilience (World Bank 2020). Further, the recovery period now includes new challenges for those at the margins.

Our proposition is that the combination of availability and accessibility of immediate support, and its relevance in the short-term as well as the medium- to longer-term effects, are likely to ascertain the extent to which the responses can be deemed to have been inclusive. In motivating the measurement framework in this paper, we consider *inclusive* as inclusive development – a process that occurs when social and material benefits are equitably distributed across divides, and the benefits necessarily comprise not only economic and material gains but enhanced well-being and capabilities as well as social and political empowerment (Hickey, Bukenya, and Sen 2014). A similar approach was

motivated for the case of COVID-19 recently by Gupta et al. (2021), emphasizing 'access to the minimum means of living a dignified life and the fair allocation of remaining resources, risks, and related responsibilities'.

While by no means a perfect picture of inclusion, our measures serve to provide an analysis of the extent to which early responses reached out to the vulnerable and more marginalised in societies, and based on that the target for continued policy support. Methodologically, first, we conducted a comprehensive review of early support measures adopted by different countries, as an immediate response to the COVID-19 pandemic, creating a database across five policy areas: *Health and Safety*; *Welfare*; *Finance and Credit*; *Taxes and Fees*; and, *Structural policies* - allowing us to examine the different measures as one response package, rather than only a specific area. Next, we construct a *COVID-19 Response Inclusiveness* (CRI) score that captures inclusivity by combining information on three proposed indicators: *access, short-term cover, medium- to long-term adequacy*, across each of the five policy areas. Access captures the extent to which the populations were able or not able to access support measures, accounting for constraints to accessing these. Short-term cover refers to how the received support covered for crisis induced short-term losses or the extent to which it could tackle short-term challenges. By long-term adequacy, we refer to the extent to which support measures offered more medium- to longer term support for recovery and resilience after the pandemic (gaining from technological improvements, capacities, infrastructure and sustained business incentives, for instance).

Then, we conduct principal component analysis (PCA)[1] for the three indicators by policy area, yielding one composite sub-score per policy area. The average across these sub-scores, yields the overall score. The CRI score allows us to study cross-country differences in response packages across the countries, providing a broad picture of inclusiveness, for example for informal or smaller businesses, and vulnerable groups such as minorities, youth or women.

Finally, we further investigate to what extent countries' responses were shaped by key economic and pandemic specific characteristics (Elgin, Basbug, and Yalaman 2020). Our findings show that the cumulative cases of COVID-19, changes in mobility trends and GDP per-capita were significantly associated with the extent of measured inclusiveness in countries' policy responses.

The remainder of the paper is organized as follows: Section 2 presents the rationale and framing. Section 3 includes a description of data sources as well as a short discussion of the CRI score; Section 4 presents our results; Finally, Section 5 provides concluding remarks.

2. Theoretical framework

Capturing the extent of inclusiveness inherent across different immediate support responses to the pandemic is important as the emerging evidence shows that it is the group of most marginalised and vulnerable people who were the worst hit by the crisis – directly through endured sickness and deaths, increasing costs of healthcare and losing out on household incomes (Anderson et al. 2020; Khalatbari-Soltani, Cumming, and Delpierre et al. 2020; Torti et al. 2020; Gupta et al. 2021). These groups also suffered indirectly, as a result of movement restrictions to stop the spreading of the virus, such as

social distancing, closure of markets and schools, mobility restrictions and curfews (Rohwerder 2020; Saha, Carreras, and Thompson 2022).

The initial support measures should therefore be assessed closely to understand the extent to which the above mentioned groups had support and what the gaps may have been. Studies have shown that early on during COVID-19, support was mostly directed to businesses and workers in the formal economy, and as such were not typically available for households who depended on the informal sector (Gallien and van den Boogaard 2020; CGAP 2020; ILO 2020b, 2020c).

To examine inclusiveness of support measures, and driven by the aim of capturing equitable distribution of social and economic gains, enhanced well-being and capabilities, and social and political empowerment (Hickey, Bukenya, and Sen 2014; Gupta et al. 2021) – we further propose and explain the three indicators to investigate policy support in the aftermath of the pandemic.

2.1. Access

A policy or support measure can be available but for various reasons (intended or not-intended), there may not be sufficient awareness, or there may be barriers that can affect accessibility for specific groups. Even when there is availability, access is likely to vary across countries, for example – especially for those without employers, banks or identification systems to share contacts, it is difficult to reach citizens in need of assistance. Access is based on the idea of social inclusiveness and a rights-based approach, as also echoed in Gupta et al. (2021), such that people can access goods and services critical for basic needs based on fair allocation.

Extending the logic of social inclusiveness further, we hypothesise that access will be dependent on the existing scenario in country; and, in general, measures with lower accessibility are likely the ones for which individuals or firms must apply and that require checks on eligibility (Saha, Carreras, and Quak 2020; Quak, Saha and Thorpe 2022). For example, sociocultural norms can restrict some groups of vulnerable women from applying for support, making specific measures less equitable than others, and likely correlated with the extent of social empowerment of women and fairness in societies.

In some cases, digital technologies can simplify the application process, for example for small loans, and as such could provide alternative methods and data to facilitate and expedite credit decisions by banks. This is particularly important during a crisis, like the pandemic, when travel restrictions are in place and responses need to be timely. However, perceived trust, ease of use and usefulness are all important variables to adapt to such mobile solutions in an equitable way (Okeke and Eze 2018).

Access is also likely to be varied across policy areas. For health and safety, access will be correlated with the share of out-of-pocket spending on health by households (of total current health expenditures), capturing weaknesses, strengths and areas that need investment in a country, such as additional health facilities, better health information systems or better trained human resources. For example, individuals in Africa have relatively high out-of-pocket expenses (Calderon et al. 2020)- Total health expenditure per capita stood at US$32 in 2019, which is less than half the levels recommended by the World Health Organization (WHO) for low-income countries (US$86).

For welfare measures, our access measure is linked with gender equality, equity of public resource use, building human resources, social protection and labour, and policies and institutions for environmental sustainability (WDI).[2]

In terms of finance and credit support, access is contingent on the rules affecting the scope, accessibility and quality of credit information available through public or private credit registries. The World Bank credit information index affecting the accessibility and quality of credit information (ranges from 0 to 8) suggests stark differences across countries. For instance, Gambia, Sierra Leone, Cameroon, Mozambique and Lesotho are on the lower end.

Access to responses for taxes and fees will depend on reducing or postponing indirect tax burdens and fees for wider reach (for instance those in the informal sector or for specific individuals), in relation to VAT, mobile money, digital tools, utilities, etc. For example, access to electricity – it being impossible to operate a factory, run a shop, grow crops or deliver goods to consumers without using some form of energy (Carr 2019). Further, account ownership at a financial institution or with a mobile-money service provider capture the waivers for mobile money and general loans.

Finally, some governments put in place measures to support innovative practices such as new modes of finance, digital ways of working, as well as promoting entrepreneurialism of MSMEs through structural policies (Organisation for Economic Co-operation and Development (OECD) 2020), but access may still be complex in less developed settings, as internet coverage remains limited or patchy at best.

The above likely inequities in access to early support measures lead us to our first hypothesis:

Hypothesis 1: *The most vulnerable or marginalised populations face accessibility constraints which may reduce their access to support measures in the immediate aftermath of a crisis, even when support is available.*

2.2. Short-term cover

Support can be targeted for short-term relief objectives or at medium- to longer-term recovery. From a short-term perspective, it was critical to address the health, hygiene and sanitation issues for workers and households. Support measures (health guidelines, distribution of PPE, hand sanitation hubs, for instance) should not only be available and accessible but need to provide coverage and address economic and social well-being needs of different populations, and also be placed at strategic locations.

Cash transfers, direct food transfers and other social protection measures (i.e. public works) are often used by governments during crisis situations as macroeconomic stabilisers (anti-cyclic measures), which can take effect with less delay than other discretionary fiscal measures (Tondini 2017; ILO 2020d, 2020). In this context, employment protection schemes are among the most efficient measures to contrast individuals' vulnerability (Midões and Seré 2022). Hence, it is important to ask how much the support covers immediate losses (e.g. income) or addresses increased costs (e.g. food expenditures). The most vulnerable and marginalised populations often do not have buffers for shocks and are limited in their coping strategies (Rohwerder 2020). Some short-term measures

addressing the challenges of COVID-19 have been linked to investing in natural capital to improve the long-term productivity and resilience (Rasul et al. 2021).

Support measures that focus on short-term increase in liquidity of businesses and households via low-interest loans, debt restructuring, debt waivers, lower interest rates and moratoriums on debt repayment also need to be assessed for their coverage. In general, there is a large variety of financial support available, particularly to businesses; however, such support is used differently depending on firm size, formality, time in business and skills/network of entrepreneurs (World Bank 2016; Saha, Carreras, and Quak 2020).

The short-term relevance of financial support measures is also likely to be different for specific groups. Coverage depends on how quickly they receive support (i.e. loan), the amount involved (i.e. lower debt repayments) and terms involved (i.e. loan guarantees). For the most vulnerable groups, inclusion of microfinance institutions and community-based financial schemes is important as they rely mostly on these for accessing finance (Fox and Kaul 2017; Datta et al. 2018). Measures can also be targeted for example to reduce collateral requirements for women or giving more attention to specific sectors (e.g. tourism, construction, agriculture).

Coverage also gives some indications about how measures are able to adjust to price shocks, for example by reducing tax burdens and fees (in relation to VAT, mobile money, utilities). Households and businesses rely on timely support to lower utility and operational costs (e.g. subsidies, temporary fee reductions) and temporary exemptions from tax payments. This also implies for more structural measures. In the short term, information for adapting, identifying and learning about unknown elements is required as quickly as those elements appear. Support can increase information, stimulate learning to adapt, for example online solutions.

This leads us to our second hypothesis:

Hypothesis 2: *Short-term cover from immediate support in a crisis will likely be driven by existing standards of living, with difficulties in targeting to specific groups.*

2.3. Medium- to long-term adequacy

As such if measures are available and accessible, and they could be addressing the purpose of providing enough short-term coverage against falls of incomes or profits, the more medium- to longer-term impacts are also important especially for social well-being and longer-term empowerment. Medium- to long-term objectives are needed to ensure groups and firms can bounce back strongly after crisis. The question of whether governments can scale up support and sustain these over the longer-term, not exacerbating pre-existing social inequalities has been debated (Gupta et al. 2021; Bambra et al. 2020).

Long-term health risks may exacerbate expenses and have a catastrophic impact on individuals and households. Some types of insurance schemes afford significant protection against unexpected health expenditures (Acharya et al. 2013), but should include vulnerable groups. For instance, the National Health Insurance Scheme (NHIS) in Ghana has a specific focus on informal women workers who are more likely to get preventive

health check-ups and attention from trained health professionals which has long-term benefits for them (Acharya et al. 2013). Social protection schemes could have longer term benefits as well beyond the pandemic as they combine learning and information (cash transfer that include training) (IPA, 2014) or public work is focused on improving infrastructural constraints or climate adaptation (Zimmermann 2014; ILO 2020d). For example, in Niger, an evaluation found that cash transfers and savings facilitation had sustained productive impacts more than 1.5 years after transfers ended (Mallam Barmou 2018).

Financial support is only relevant in the longer term when repayments can be spread over a longer period or when during a moratorium the interest payment will not accumulate. For the long term, it is necessary to structurally reduce the finance gap for many small businesses by including other services, like insurance, technical assistance and business trainings. The literature is clear that combining access to finance interventions with advisory services, technical assistance and business trainings tends to have a more positive effect on firms (productivity, upscaling, even employment effects) than just financial support (Quak and Flynn 2019).

Longer-term relevance of support measures also increases when short-term measures are linked with larger investment programmes, for example in infrastructure, re-skilling the unemployed, and value chain or sector-related development. Systematically organising monitoring and evaluation activities should be in place. Longer term goals require strategies for long-term investment to ensure that short-term actions result in long-term benefits through appropriate planning towards social and environmental conditions for the sustainable recovery of the health and economic sectors (Rasul et al. 2021).

Our third hypothesis explores the link between short-term and more medium-/long-term aspects:

Hypothesis 3: *A focus on longer term goals is likely to be effective when the short-term outcomes are linked to long-term agendas, resulting in greater inclusivity of support measures.*

2.4. Correlates of inclusiveness

The COVID-19 pandemic required a set of responses by the governments, aimed not only at supporting the health risks but also the economic fallout under extreme pressure; also offering social protection nets to ease the impact of the crisis particularly for the marginalised and vulnerable. In this context, countries' responses across the world widely differed, both in terms of rapidity of execution and in terms of type of support offered.

First, lockdown measures and reduction in mobility somewhat slowed down the setting-up of entirely new response programs, letting states primarily rely on instruments already in place, also reducing the possibility of quickly adapting them to the current context (Devereux 2021; Quak, Saha and Thorpe 2022). Second, (relatively) wealthier countries were expected to be hit harder than other countries (IMF 2020), but at the same time had greater availability of financial resources for more pervasive social protection and economic response measures. Third, the share of informal employment is particularly high in low- and middle-income countries and these workers are those considered

more vulnerable during a crisis due to the insecurity of their work and the difficulties in being enrolled in social protection measures (Raga et al. 2020). Finally, the strictness of the closure and containment policies is likely to have affected the economic and socio-economic outcomes.

Our final hypothesis explores the differences in support measures:

Hypothesis 4: The *differences in terms of support measures can be attributed largely to pre-existing conditions in-country and pandemic specific characteristics.*

3. Data and methodology

To identify immediate announced or implemented policies, we construct a comprehensive database of countries' measures, using the information provided by the International Monetary Fund (IMF COVID-19 Policy Tracker, 2020) and the ILO (ILO 2020, 2020a) as of 25 May 2020.[3] Additionally, we cross-checked this information using different sources and supplemented with latest information from the IGC (2020), government websites and media outlets. In addition to economic policy measures, we gathered latest data for proxy variables across the three indicators by policy areas from different sources, outlined below.

We conduct a comprehensive review of different measures adopted by 59 countries[4] as an immediate response to COVID-19 pandemic, creating a database across the following five policy areas: (i) *Health and Safety*: Measures aimed to improve access to health, improved sanitation, etc. that protects the well-being of individuals; (ii) *Welfare*: Measures to maintain employment levels and support temporarily unemployed, such as cash transfers, fee waivers, wage or employment support; (iii) *Finance and Credit*: Measures aimed at facilitating access to credit and reducing related costs such as economic stimulus, credit schemes, loan guarantees; (iv) *Taxes and Fees*: Measures aimed at reducing or postponing indirect tax burdens and fees, in relation to VAT, mobile money, digital tools, utilities, etc.; (v) *Structural Policies*: Measures aimed at streamlining procedures providing support for clarity in rules, developing skills, teleworking/digitalisation, innovation, training and redeployment ,etc. These five areas allow us to examine the measures as one response package, rather than focus on any specific area.

Next, we outline access, cover, adequacy; the correlates used in the analysis; and an overview of the methodology.

3.1. Access

The proxy measures for access are sourced from the World Development Indicators (WDI) data,[5] as follows:

(i) For health and safety, it is based on the *share of out-of-pocket spending on health by households (out of total current health expenditures*), capturing weaknesses and strengths and areas that need investment in a country, such as additional health facilities, better health information systems or better trained human resources.

(ii) For welfare, access is captured using the *CPIA rating for policies for social inclusion and equity* (1: low to 6: high) that includes gender equality, equity of public resource use, building human resources, social protection and labour, and policies and institutions for environmental sustainability.
(iii) For finance and credit, access is based on the *depth of credit information index* that measures rules affecting the scope, accessibility and quality of credit information available through public or private credit registries; the index ranges from 0 to 8, with higher values indicating the availability of more credit information, from either a public registry or a private bureau, to facilitate lending decisions.
(iv) Access to taxes and fees is based on a combined assessment using two variables: first, as governments announce waivers of utility fees, *access to electricity (% of the population)* is important, as it will be impossible to operate a factory, run a shop, grow crops or deliver goods to consumers without using some form of energy; second, *account ownership at a financial institution or with a mobile-money-service provider (% of population aged 15 years or more)* captures the likely extent to which the wider population will be accessing the waivers for mobile money and general loans; average across the two variables gives a proxy for access.
(v) Access for structural policies is assessed using *individual use of internet (% population)* where internet users are individuals who have used the Internet (from any location) and the internet can be used via a computer, mobile phone, personal digital assistant, game machine, digital TV, etc.

3.2. Short-term cover

We investigate short-term cover using the following measures from WDI and other sources:[6]

(i) For health, using the level of *current health expenditure (as % GDP)* that include healthcare goods and services consumed.
(ii) Short-term cover from welfare measures is assessed using *coverage of social protection and labour programs* that show the percentage of population participating in social insurance, social safety net, and unemployment benefits and active labour market programs; estimates include both direct and indirect beneficiaries.
(iii) For finance and credit, ensuring liquidity support in the short-term is measured in terms of *announced fiscal support (% GDP)* taken from Elgin, Basbug, and Yalaman (2020); Hale et al. (2020); and supplemented by public announcements.
(iv) Short-term cover from tax and fees is proxied using *other taxes (% of revenue)* that includes employer payroll or labour taxes, taxes on property and taxes not allocable to other categories, such as penalties for late payment or non-payment of taxes) that are more likely to be affecting the marginalized, directly, or indirectly; the extent to which there is existing compliance to these will provide an approximation of the relief.

(v) Short-term cover from structural policies is proxied using mobile coverage measured by *mobile cellular subscriptions (per 100 people)* that includes the number of post-paid subscriptions, and the number of active prepaid accounts and applies to all mobile cellular subscriptions that offer voice communications; it excludes general internet subscriptions.

3.3. Medium- to long-term adequacy

Finally, the medium- to long-term adequacy of support[7] is proxied using data from WDI and additional sources as follows:

(i) For health, we use the *Global Health Security Index* – an overall score as the weighted sum of the following category scores: (1) Prevention of the emergence or release of pathogens (16.3%); (2) Early detection and reporting epidemics of potential international concern (19.2%); (3) Rapid response to and mitigation of the spread of an epidemic (19.2%); (4) Sufficient and robust health sector to treat the sick and protect health workers (16.7%); (5) Commitments to improving national capacity, financing and adherence to norms (15.8%); (6) Overall risk environment and country vulnerability to biological threats (12.8%).

(ii) To examine welfare, we use the adequacy of social protection and labour programs based on the total transfer amount received by the population participating in social insurance, social safety net, and unemployment benefits and active labour market programs as a share of their total welfare; welfare is defined as the total income or total expenditure of beneficiary households.

(iii) The long-term likelihood of support from finance and credit in recovering from depressed demand is proxied by the *COVID-19 Economic Stimulus Index* (CESI) that combines all adopted fiscal, monetary, and exchange rate measures (Elgin, Basbug, and Yalaman 2020).

(iv) The medium- to long-term effects from taxes and fee waivers will be driven by the fiscal capacity of the government and is measured using the current account *balance of the government* (% of GDP) that is the sum of net exports of goods and services, net primary income and net secondary income; the measure provides an indication of the country's fiscal space and therefore reflects the medium- to long-term implications for adequate financial support to firms, households and workers.

(v) To enhance longer term resilience, it is important that country responses to the pandemic include a broader array of structural policies; here, medium- to longer-term measures should include trainings and investments in building capabilities. This potential is measured by *Research and development* (R&D) expenditures - % of firms that spend on R&D; based on underlying data from World Bank enterprise surveys, the universe of firms includes both formal and informal firms.

3.4. COVID-19 Response Inclusiveness (CRI) score

A two-stage method was used to identify the various measures and investigate the extent to which these are inclusive for vulnerable/marginalised groups. In the first stage, we identify availability of measures using the review across the five policy areas. Then, where a country has an available response in a policy area, access is measured using secondary data.

Finally, the three indicators, access, short-term and medium- to long-term measures, are weighted by policy area, using principal components to yield a composite score. The details for the measurement framework are in Table A1 of the Appendix. The PCA is done on the original data and not the standardized data presented here for context and comparison – to retain variation across variables. A simple unweighted additive score is also created to check for robustness).

The composite CRI score allows for systematic comparisons across the countries. This approach has the advantage of measuring a range of indicators and mitigating the possibility that any one indicator may be over- or mis-interpreted. The composite measure can be refined such that there are less chances of leaving out any important information that is systematically correlated with the outcome of interest and reducing any reason for measurement error.

3.5. Country characteristics

Furthermore, we compiled data on country characteristics – COVID-19 cases, mobility, GDP per capita, informal employment (as % of total non-agricultural employment), the government response stringency index of Hale and Webster (2020) as explanatory variables in our analyses.

Data on cumulative cases of COVID-19 at country level have been extracted from the 'WHO Coronavirus (COVID-19) Dashboard',[8] which contained detailed information on the official number of cases and deaths reported at country level. Information on mobility have been obtained using data from the 'Google COVID-19 Community Mobility Reports',[9] and specifically calculating the average percentage change in mobility across the five categories identified in the dataset: (i) retail and recreation; (ii) grocery and pharmacy; (iii) parks; (iv) transit stations; (v) workplace; and (vi) residential. Information on GDP per capita and informal employment (as % of total non-agricultural employment) have been extracted from the WDI dataset of the World Bank.[10] Finally, the stringency index is one of the four policy indices calculated by Hale and Webster (2020), indicating the strictness of lockdown policies affecting people's behaviour.

4. Results

4.1. Descriptive analysis

Table 1 reports descriptive summary statistics for all five policy areas as well as the overall CRI score.[11] The scores for each policy area are calculated with PCA[12] using the three indicators for access, short-term cover and medium- to long-term adequacy of the measures.[13] The overall CRI score is a simple average of all five sub-scores.[14]

Table 1. Summary statistics.

CRI – PCA scores	Mean	Median	SD	Min	Max
Overall	38.61	36.94	16.08	11.24	75.47
Health	41.13	37.68	24.27	0	100
Welfare	45.49	51.34	24.22	0	100
Finance and credit	34.71	32.6	19.67	0	100
Tax and fees	33.31	35.01	19.76	0	100
Structural policies	38.42	32.33	23.6	0	100
N	**59**				

Source: Author's own using secondary data across various sources. Range for all score is 0–100.

On average, the sub-scores for policy areas are between 33 and 46, with the overall CRI score below 40. The lower scores reflect that while countries have responded with policies, the extent to which these are accessible and are likely to provide short-term cover as well as medium- to long-term support is varied. We also find that welfare measures score the highest, while measures in terms of taxes and fees score on the lower end and may be less inclusive.[1]

Figure 1 illustrates the histogram of the overall CRI score that suggests a right-skewed distribution.[15] This means all countries had responded with a package of measures as of 25 May2020 and were likely to provide some short-term as well as medium- to long-term support. However, there is a significant variation across countries, with high standard deviations for all policy areas.

4.2. Empirical analysis

Figure 2 reports the average access indicator across countries and by area (standardized to the range 0–100 for presentation). We find that across all countries, on average, access to immediate responses were constrained. Further, health and safety scores higher in terms of access, while structural measures score the lowest. This implies that overall, for the countries in the sample, populations had greater access to health and safety support measures in the immediate aftermath of the pandemic than to other types of support measures.

While some affected firms and workers adapted – switching to work from home, online retail or home delivery, for firms to adapt to these modes quickly, certain organizational capacities, familiarity with digital platforms, sufficient infrastructure such as internet coverage and also consumer demand for these were needed (Saha, Carreras, and Quak 2020). For instance, the share of jobs that can be done at home in African countries ranges from 18% to 25% (Dingel and Neiman 2020), close to the world average, suggesting that populations in some African economies could have been continuing to work during periods of stringent social distancing; however, the main challenge is that less than 20% of the African population has access to the internet – compared with 90% of the population in advanced countries and 60% in other developing countries (Calderon et al. 2020). These issues have been acute in sectors such as food

[1] For details on coverage of social protection responses, see Gentillini et al. (2020)

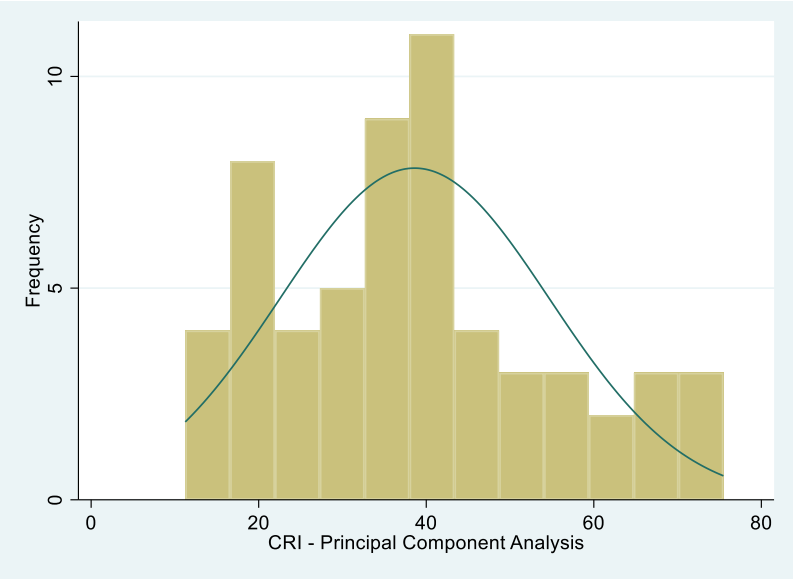

Figure 1. The COVID-19 Response Inclusiveness (CRI) Score: Histogram. Source: Author's own.

services, retail trade and manufacture of non-essential goods, where workers were at risk of being laid off.

Hence, the most vulnerable or marginalised populations faced accessibility constraints in terms of access to immediate support measures, even when support was available – confirming *hypothesis 1* (Gupta et al. 2021; Quak, Saha and Thorpe 2022).

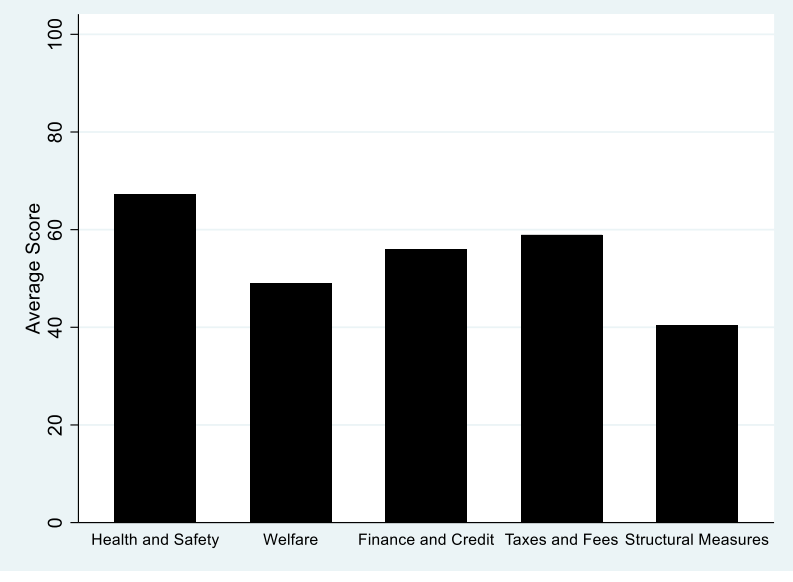

Figure 2. Access indicator across policy areas. Source: Author's own. Note: % on *Y*-axis. Range for the indicator is 0–100.

Targeting such measures have had implications in the short-term – for instance, first signs showed that moratorium on debt payments during the Covid-19 crisis were not reaching the microfinance sector.[16] Debt waivers also may not work when the groups are not explicitly targeted within the policies. Policies may also overlook (informal) MSMEs and focus more on employees who lost work in the formal economy, or policies remain vague about how the strategy can target debt waivers for enterprises in the informal economy.

Furthermore, in the crisis, interventions on lowering or waiving mobile service fees or increasing daily transaction limits for small-business customers could have positive impacts on small and medium enterprises, but perceived trust, ease of use and usefulness are important variables to adapt to mobile solutions that will also be importantly linked to the existing economic standards and socio-economic conditions.

Hence, short-term coverage from responses in the aftermath of the crisis was driven by the prior economic situation across countries, as shown in Figure 3, and immediate targeting measures for the more marginalised and vulnerable groups is likely to have met with limitations – confirming *hypothesis 2*.

Next, we compare the short-term and longer-term measures. Figure 4 depicts the correlation between the average for the short-term cover indicator across all policy areas and the medium- to longer-term adequacy indicator (standardized to the range 0–100 for presentation). On average, both measures are at approximately 17–22%. Countries in quadrant I (Zambia, Namibia, Cote d'Ivoire, etc.) are the ones with lower than average short-term cover but higher medium- to long-term adequacy; those in quadrant II

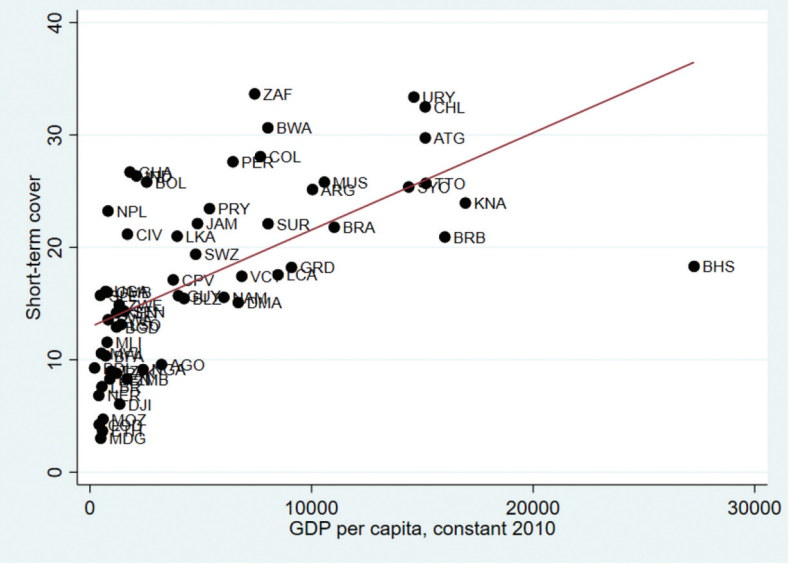

Figure 3. Reports the correlation between the indicator for average short-term cover across countries and by area (standardized to the range 0–100 for presentation) and GDP per capita. We find a positive correlation, that suggests countries with greater economic output on average also provided the greatest short-term cover in terms of support measures across all five areas. Source: Author's own. Note: % on *Y*-axis, range is 0–100. GDP per capita, constant 2010 on *X*-axis. Country codes in Table A4.

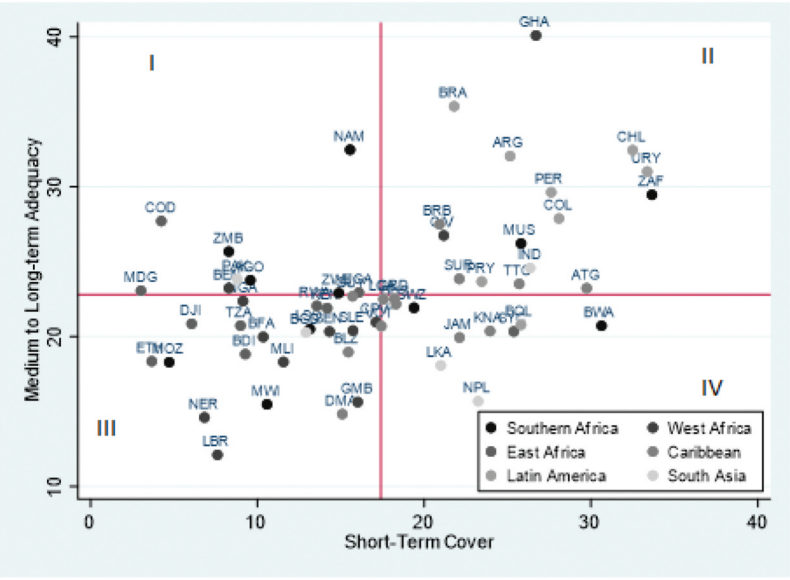

Figure 4. Short-term cover and medium- to long-term adequacy. Source: Author's own. Note: % on *X*-axis and *Y*-axis. Range for these indicators is 0–100. Country codes in Table A4.

(Argentina, Brazil, Ghana, etc.) do better both in terms of the short-term and medium- to longer-term measures; quadrant III countries (Mali, Kenya, Malawi, Niger, etc.) have lower values for both indicators; finally, quadrant IV countries (Jamaica, Nepal, Botswana, etc.) fare well in terms of short-term cover but score lower than the regional average on the medium- to longer-term effects.

From a medium- to long-term perspective, FAO (2020) suggests that specific measures should be tailored in the short-term – for example, towards women workers with care responsibilities at home and families that may resort to child labour as a coping strategy, as well as other vulnerable subgroups. Further, employment generation can be targeted through paid work opportunities and public work programs for affected populations that been a popular government tool in the aftermath of the 2007–2009 crisis to combat rising unemployment, poverty and food insecurity (Zimmermann 2014). Overall, we find that countries that do better, both, in terms of the short-term and medium- to longer-term measures have in fact made some links between the two goals, and fare better on the inclusivity score – therefore affirming *hypothesis 3*.

Next, we conduct some simple cross-country regressions with the CRI score as the dependent variable, and the following independent variables: COVID-19 cumulative cases as of 25 May 2020[17]; the average change in mobility; the real GDP per-capita; the percentage of informal employment (as % of total non-agricultural employment); and, the Stringency Index proposed by Hale and Webster (2020).[18] Table 2 reports the results of the regression analyses with the PCA score.[19]

In the first regression in Column (1), we regress the CRI score on the total cases as main independent variable. The coefficient is positive and statistically significant across all models, indicating that countries with larger number of cases responded with more inclusive support – policy measures that are also relatively more accessible, and likely to

Table 2. Cross-Country OLS Regressions with CRI-PCA.

	(1)	(2)	(3)	(4)	(5)
Total Cases (inhundreds)	0.013***	0.010***	0.009***	0.006**	0.007***
	(0.003)	(0.001)	(0.002)	(0.002)	(0.002)
Average change in mobility		−0.999***	−0.668***	−0.465**	−0.350
		(0.196)	(0.204)	(0.187)	(0.279)
GDP per capita ('000 constant 2010 USD)			1.113*	1.988**	2.224***
			(0.575)	(0.876)	(0.317)
Informal Employment				−0.134	
				(0.219)	
Stringency Index					0.088
					(0.140)
Observations	58	40	40	30	38
R-squared	0.181	0.454	0.578	0.734	0.716

Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

provide short-term and medium- to long-term support. This provides a relative assessment of inclusivity across countries.

In Column (2), we include average change in mobility since the COVID-19 outbreak. The negative and statistically significant coefficient indicates a high correlation between greater drop in mobility, and more inclusive support measures. It is no doubt that restrictions meant that consumers were demanding less goods and spending considerably less on services such as travel, entertainment etc., directly affecting enterprises and from knock-on effects of reduced exports. For example, retail and recreation sites experienced a reduction in mobility between 20% and 50% across all African countries.[20] Furthermore, public transit and mobility for places of work decreased by 29% and 14%, with a significant toll on the 41% of people globally who were already living below the $2-a-day poverty line.[21] SMEs reported great difficulties in accessing raw materials, affecting production, workers were laid off, often with the expectation of shutting operations completely. Overall, mobility changes in the immediate aftermath of the pandemic had an important link with how governments responded.

In the third regression in Column (3), we add the GDP per capita (constant 2010 USD). With the other independent variables, GDP per capita is significantly associated with the CRI score, indicating that countries with better economic standard of living are the ones with a higher score. Hence, prior economic indicators had a strong bearing on the extent to which support measures were inclusive.

Column (4) includes the share of informal workers as % of total non-agricultural employment as additional country-level characteristics. The coefficient is not statistically significant, suggesting that the inclusiveness score on its own may not be able to capture the full extent to which the informal sector was considered in these responses.[22]

Finally, results in Column (5) report the results of the model with the Stringency Index. We find a statistically insignificant relationship, suggesting that this index does not explain the extent of inclusiveness as measured by our CRI score. This is likely explained by the fact that the Stringency Index focuses on public health controls adopted by governments in response to the pandemic rather than a wider array of support.

Overall, our results point to the differences in terms of support measures being attributable largely to pre-existing conditions in-country and pandemic specific characteristics – drawing support to *hypothesis 4*, resonating largely with recent literature on inclusive development

and policy measures related to COVID-19 (Gupta et al. 2021; Ghosal, Bhattacharyya, and Majumder 2020; Brown, Ravallion, and Van De Walle 2020).

5. Conclusion

In this paper, we operationalised an inclusive development lens and introduced a database where we quantified the initial policy measures across countries in response to the COVID-19 pandemic, as of 25 May 2020. Using information across three indicators, we construct the composite CRI score that covers five policy areas. The score is meant to provide a broad picture of access, short-term cover and medium- to long-term adequacy of the response package across countries. These areas were motivated to capture inclusivity in initial support measures as well as their potential impact. Additionally, we presented some basic results on the predictors of the responses.

Our findings are not causal but reveal variations in the package of measures across countries and provide insights on the significant correlations of COVID-19 cases, mobility changes, and GDP per capita with the CRI score. Specifically, we find that pandemic-specific characteristics – the number of COVID-19 cases and mobility changes, and prior economic characteristics as measured by GDP per-capita are highly correlated with our measure of inclusiveness in support measures across countries.

Overall, our results contribute to the literature that has explored greater understanding of the initial policy responses to COVID-19 (Hale and Webster, 2020; Elgin, Basbug, and Yalaman 2020; Gupta et al. 2021, among others). Our analysis provides an overall questioning of the measures, in terms of wider access, short-term and medium- to longer-term effects. Although there are limitations to this analysis – as the limited number of observations at one point in time – we believe that the results nonetheless reveal insights on the extent of wider considerations in policy responses and will be helpful to other researchers in studying the outcomes of specific initial policy responses for the health and economic crisis and its continuing aftermath.

Notes

1. PCA originated in Pearson (1901) and Hotelling (1933); recently applied in the context of COVID-19 in Elgin, Basbug, and Yalaman (2020).
2. See: http://wdi.worldbank.org/.
3. Available on request.
4. Includes developing countries (full list in Appendix) – with consistent data availability across different sources.
5. The objective was to provide a quick assessment of accessibility to the measures, based on existing information for each policy area. See: http://wdi.worldbank.org/.
6. The extent of short-term cover from these measures is likely to be driven by existing resources in country, such that we make use of secondary information to gain an assessment of likely short-term sufficiency.
7. Gauging the extent of medium- to longer-term adequacy is challenging – our choice here is driven by more comprehensive measures that are likely to yield an approximate picture of effects over years.
8. https://covid19.who.int/
9. https://www.google.com/covid19/mobility/
10. http://wdi.worldbank.org/

11. Summary statistics for the simple unweighted score are reported in Table A2 in the Appendix.
12. PCA eigenvectors give significant information about the three indicators used to create the score. We report the principal components as well as the eigenvalues and the proportion of the variance explained in Table A3 in the Appendix.
13. The entire data series on scores by policy area is reported in Table A4 in the Appendix.
14. We conduct the PCA for each policy area, to generate weights across the three indicators that are combined for the sub-score by policy area. This approach helps account for the relative importance of each indictor by policy area.
15. Figure A1 in Appendix presents the histogram for the unweighted score.
16. See: https://www.ids.ac.uk/opinions/the-informal-sector-urgently-needs-cash-and-debt-relief/.
17. Data on mobility have been extracted by the "Google COVID-19 Community Mobility Reports" as of May 25th. The measure proposed in this analysis is calculated as the average change in mobilities across retail and recreation, groceries and pharmacies, parks, transit stations, workplaces and residential areas since the beginning of the pandemic.
18. The Stringency Index consists of public health controls adopted by governments in response to the pandemic.
19. Table A5 in the Appendix reports the cross-Country OLS Regressions with the CRI Unweighted Score. Results are robust to the use of this alternate version of the score.
20. Author's own using Google's mobility data as per availability. These show how visits and length of stay at different places change compared to a baseline.
21. See: https://www.brookings.edu/blog/africa-in-focus/2018/11/21/figure-of-the-week-understanding-poverty-in-africa/.
22. The CRI score can be modified to assess the extent of cover specifically for the informal sector – requiring a closer study of announced policies, to be able to examine the scope for informal enterprises and workers. Details are available in Saha, Carreras, and Quak (2020).

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Appendix

Table A1. COVID-19 Response Inclusiveness (CRI) Score – Measurement framework.

S. No.	Area	ID	Name	Description	Rationale	Data Sources
1	Health and Safety	Q1	Availability	Identify if a measure has been announced or implemented	General policy responses	International Monetary Fund – Policy response to COVID-19, World Bank's Social Protection and Jobs Responses to COVID-19; ILO Country policy responses; IGC's COVID-19 policy tracker; Government sources and media channels
		Q2	Access	Ease of access to health facilities	Based on the share of out-of-pocket spending on health by households (of total current health expenditures)	World Development Indicators
		Q3	Cover	Health expenditure	Current health expenditure (% of GDP)	World Development Indicators
		Q4	Adequacy	Composite measure	Global Health Security Index	GHS Index
2	Welfare	Q1	Availability	Identify if a measure has been announced or implemented	General policy responses	International Monetary Fund – Policy response to COVID-19, World Bank's Social Protection and Jobs Responses to COVID-19; ILO Country policy responses; IGC's COVID-19 policy tracker; Government sources and media channels.
		Q2	Access	Ease of access to welfare support	Based on the CPIA rating for policies for social inclusion and equity that includes gender equality, equity of public resource use, building human resources, social protection and labour, and policies and institutions for sustainability	World Development Indicators
		Q3	Cover	Coverage	Based on coverage (both direct and indirect beneficiaries) of social protection and labour programs (% of population) that provides approximate measures of social protection systems performance of the country based on nationally representative household surveys	ASPIRE: The Atlas of Social Protection – Indicators of Resilience and Equity, The World Bank
		Q4	Adequacy	Adequacy	Based on adequacy (both direct and indirect beneficiaries) of social protection and labour programs (% of total welfare of beneficiary households) that provides approximate measures of social protection systems performance of the country based on nationally representative household surveys	ASPIRE: The Atlas of Social Protection – Indicators of Resilience and Equity, The World Bank

(*Continued*)

Table A1. (Continued).

S. No.	Area	ID	Name	Description	Rationale	Data Sources
3	Finance and Credit	Q1	Availability	Identification if a measure has been announced or implemented	General policy responses	International Monetary Fund – Policy response to COVID-19, World Bank's Social Protection and Jobs Responses to COVID-19; ILO Country policy responses; IGC's COVID-19 policy tracker; Government sources and media channels
		Q2	Access	Ease of access to finance and credit	Based on the credit information index affecting the scope, accessibility, and quality of credit information; ranges from 0 to 8, with higher values indicating the availability of more credit information to facilitate lending decisions	World Development Indicators
		Q3	Cover	Liquidity support through direct credit lines or guaranteed commercial loans	Announced fiscal support (% GDP)	Elgin, Basbug, and Yalaman (2020); Hale and Webster (2020) - supplemented by announcements
		Q4	Adequacy	Medium- to long-term likelihood of recovering from depressed demand	COVID-19 Economic Stimulus Index (CESI)	Elgin, Basbug, and Yalaman (2020)
4	Taxes and Fees	Q1	Availability	Identification if a measure has been announced or implemented	General policy responses	International Monetary Fund – Policy response to COVID-19, World Bank's Social Protection and Jobs Responses to COVID-19; ILO Country policy responses; IGC's COVID-19 policy tracker; Government sources and media channels.
		Q2	Access	Ease of access to indirect tax exemptions and fee waivers	Based on access to electricity (% of population) and account at a financial institution or with a mobile-money-service provider (% of population 15 years or more)	World Development Indicators
		Q3	Cover	Cover from indirect tax or fee exemptions	Based on other taxes (as % of revenue) include employer payroll or labour taxes, taxes on property, and taxes not allocable to other categories, such as penalties for late payment or non-payment of taxes	World Development Indicators
		Q4	Adequacy	Current account balance of the government (% of GDP)	Based on an indication of the country's fiscal space	World Development Indicators

(*Continued*)

Table A1. (Continued).

S. No.	Area	ID	Name	Description	Rationale	Data Sources
5	Structural policies	Q1	Availability	Identification if a measure has been announced or implemented	General policy responses	International Monetary Fund – Policy response to COVID-19, World Bank's Social Protection and Jobs Responses to COVID-19; ILO Country policy responses; IGC's COVID-19 policy tracker; Government sources and media channels
		Q2	Access	Ease of access to measures that simplify procedures or provide information for adapting to new ways of work	Individual use of internet (% population)	World Development Indicators
		Q3	Cover	Mobile coverage	Mobile cellular subscriptions (per 100 people)	World Development Indicators/International Telecommunication Union
		Q4	Adequacy	Research and development focus of firms	R&D (% of firms)	World Development Indicators

Source: Author's own.

Table A2. Summary Statistics for unweighted scores.

	Mean	Median	SD	Min	Max
CRI – Unweighted Scores					
Overall	**34.15**	**33.88**	**10.15**	**11.58**	**53.62**
Health	39.63	38.79	10.17	20.71	59.42
Welfare	36.27	37.19	10.58	14.97	67.02
Finance and credit	37.17	41.15	21.82	8.04	67.2
Tax	27.04	30.76	13.26	−0.43	49.64
Structural policies	30.64	27.34	16.75	3.86	68.72
N	**59**				

Table A3. Principal Component Analysis – CRI Score.

Health and Safety				
Component	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**
Component 1	1.38	0.43	0.46	0.46
Component 2	0.95	0.29	0.32	0.78
Component 3	0.67	.	0.22	1.00
Variable	**Component 1**	**Component 2**	**Component 3**	
Access	−0.33	0.94	0.01	
Short-Term	0.67	0.23	0.71	
Long-Term	0.67	0.24	−0.71	
Welfare				
Component	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**
Component 1	1.37	0.40	0.46	0.46
Component 2	0.98	0.32	0.33	0.78
Component 3	0.65	.	0.22	1.00
Variable	**Component 1**	**Component 2**	**Component 3**	
Access	0.67	−0.26	0.69	
Short-Term	0.69	−0.12	−0.71	
Long-Term	0.27	0.96	0.10	
Finance and Credit				
Component	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**
Component 1	1.60	0.84	0.53	0.53
Component 2	0.76	0.11	0.25	0.78
Component 3	0.65	.	0.22	1.00
Variable	**Component 1**	**Component 2**	**Component 3**	
Access	0.54	0.82	0.16	
Short-Term	0.60	−0.25	−0.76	
Long-Term	0.58	−0.51	0.63	
Tax and Credits				
Component	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**
Component 1	1.33	0.31	0.44	0.44
Component 2	1.02	0.37	0.34	0.78

(*Continued*)

Table A3. (Continued).

Component 3	0.65	.	0.22	1.00
Variable	**Component 1**	**Component 2**	**Component 3**	
Access	0.72	0.03	−0.70	
Short-Term	0.60	−0.53	0.60	
Long-Term	0.35	0.85	0.40	

Structural Measures

Component	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**
Component 1	1.47	0.54	0.49	0.49
Component 2	0.92	0.32	0.31	0.80
Component 3	0.61	.	0.20	1.00
Variable	**Component 1**	**Component 2**	**Component 3**	
Access	0.67	−0.08	−0.73	
Short-Term	0.59	−0.54	0.60	
Long-Term	0.44	0.84	0.31	

Table A4. COVID-19 Response Inclusiveness (CRI) Score – Underlying data (standardised to 0–100).

		Panel A: CRI - PCA						Panel B: CRI - Unweighted Score					
		Health	Welfare	Finance and credit	Tax	Structural policies	Overall	Health	Welfare	Finance and credit	Tax	Structural policies	Overall
Angola	AGO	1.52	22.47	15.61	49.47	15.17	30.92	39.94	24.03	10.74	21.02	12.35	21.62
Antigua and Barbuda	ATG	19.22	54.72	25.64	51.63	94.69	71.31	40.89	39.82	12.5	38.2	68.73	40.03
Argentina	ARG	93.32	65.08	57.13	60.92	74.82	92.55	59.42	45.75	62.54	37.57	58.04	52.67
Bahamas	BHS	43.65	54.72	17.85	54.76	36.16	40.87	26.34	39.82	10.82	37.32	38.27	30.51
Bangladesh	BGD	22.8	5.29	24.31	43.34	26.73	29.19	22.38	18.72	23.67	34.53	18.2	23.5
Barbados	BRB	40.92	54.72	43.46	63.64	82.69	63.48	36.52	39.82	14.48	39.26	61.78	38.37
Belize	BLZ	28.68	55.41	20.35	31.52	32.33	42.98	47.28	40.31	11.03	34.69	32.5	33.16
Benin	BEN	15.76	9.6	17.23	6.07	18.26	24.92	35.64	24.03	10.99	8.2	15.76	18.92
Bolivia	BOL	56.63	78.29	38.37	43.83	25.57	53.51	29.29	49.75	55.11	36.05	25.24	39.09
Botswana	BWA	26.19	68.62	38.52	30.08	63.04	73.11	57.81	43.35	55.07	28.96	45.86	46.21
Brazil	BRA	100	72.04	90.84	43.71	58.66	89.4	53.56	49.27	66.16	42.27	49.61	52.18
Burkina Faso	BFA	35.71	0	15.42	6.01	25.69	23.34	43.41	18.86	10.73	7.15	17.99	19.63
Burundi	BDI	42.18	11.49	15.36	4.68	25.23	13.33	26.21	22.6	12.47	−0.43	11.49	14.47
Cabo Verde	CPV	37.68	51.99	51.09	32.41	30.13	43.74	26.39	40.1	50.38	32.87	30.58	36.07
Chile	CHL	95.87	81.93	61	38.57	100	99.43	50.05	50.37	56.53	42.82	68.31	53.62
Colombia	COL	57.64	72.16	45.22	58.48	76.56	85.63	54.7	47.37	55.29	36.91	54.58	49.77
Congo Democratic Republic	COD	12.62	11.85	35.4	19.24	13.79	25.74	37.56	22.83	14.02	10.58	8.8	18.76
Côte d'Ivoire	CIV	30.33	28.54	51.35	42.85	49.28	66.65	40.31	32.1	62.31	27.11	40.8	40.53
Djibouti	DJI	0	41.54	29.12	20.64	34.16	30.58	43.38	33.47	11.78	15.97	32.98	27.52
Dominica	DMA	18.81	45.32	25.64	27.42	55.25	35.71	41.99	36.43	12.5	29.74	48.85	33.9
Eswatini	SWZ	32.93	28.35	19.35	35.74	23.58	41.7	54.26	28.1	33.14	26.51	24.82	33.37
Ethiopia	ETH	31.52	5.59	12.38	2.55	4.15	14.44	43.82	21.68	9.16	8.63	10.41	18.74
Gambia	GMB	16.92	29.03	12.84	6.14	33.06	32.32	48.35	27.38	8.86	11.44	24.07	24.02
Ghana	GHA	22.83	100	38.57	39.31	60.84	100	39.54	67.02	49.75	33.9	41.34	46.31
Grenada	GRD	21.92	59.07	23.94	48.54	62.9	51.54	31.86	43.19	11.77	36.18	46.81	33.96

(*Continued*)

Table A4. (Continued).

		Panel A: CRI - PCA						Panel B: CRI - Unweighted Score					
		Health	Welfare	Finance and credit	Tax	Structural policies	Overall	Health	Welfare	Finance and credit	Tax	Structural policies	Overall
Guyana	GUY	25.78	51.34	32.6	35	63.74	58.15	42.93	37.19	60.5	30.76	37.54	41.78
India	IND	47.41	85.13	50.65	38.66	49.14	68.99	31.31	51.8	55.68	42.52	32.64	42.79
Jamaica	JAM	24.83	62.62	35.54	60.08	54.56	66	50.13	42.09	60.4	45.2	42.89	48.14
Kenya	KEN	64.62	44.8	35.2	32.25	36.21	48.2	31.96	35.33	60.73	34.87	23.48	37.28
Lesotho	LSO	62.41	35.68	28.74	21	16.49	29.3	30.58	32.26	30.51	19.79	19.81	26.59
Liberia	LBR	66.54	1.18	0	2.52	7.16	0	24.44	14.97	8.04	2.73	7.73	11.58
Madagascar	MDG	41.54	30.63	22.34	15.12	7.9	26.93	49.06	28.8	29.39	10.71	7.22	25.04
Malawi	MWI	45.41	51.67	40.63	0	8.71	28.33	54.12	37.56	55.57	6.57	8.33	32.43
Mali	MLI	14.47	24.66	18.55	25.31	26.1	30.03	40.64	25.2	11	18.24	18.61	22.74
Mauritius	MUS	39.55	65.36	37.14	47.46	68.7	81.13	35.72	45.65	54.12	46	51.87	46.67
Mozambique	MOZ	14.48	41.94	25.54	18.52	1.84	27.2	54.56	36.46	35.83	10.89	6.09	28.77
Namibia	NAM	69.92	39.77	76.38	39.05	52.66	59.98	34.1	33.25	59.88	33.18	35.43	39.17
Nepal	NPL	49.73	54.61	22.18	3.93	30.02	35.85	20.71	39.36	41.15	15.58	26.75	28.71
Niger	NER	47.94	5.39	43.05	9.39	0	15.55	36.07	17.19	61.59	5.48	3.86	24.84
Nigeria	NGA	37.69	32.67	36.13	33.66	38.83	46.08	21.78	30.19	60.44	24.36	32.64	33.88
Pakistan	PAK	24.74	36.86	54.44	19.47	20.36	39.89	29.48	31.08	57	21.5	14.51	30.71
Paraguay	PRY	45.91	70.38	43.81	39.1	26.77	62.77	38.5	46.54	55.21	37.21	31.2	41.73
Peru	PER	53.98	68.93	100	62.99	38.98	75.81	49.45	45.3	67.2	36.14	32.76	46.17
Rwanda	RWA	34.81	53.32	57.99	21.18	31.35	50.1	57.07	41.08	63.07	19.34	19.63	40.04
Saint Lucia	LCA	31.75	59.07	21.4	45.19	20.61	47.82	37.58	43.19	10.66	40.1	25.54	31.41
Senegal	SEN	35	40.47	75.3	35.01	20.23	42.79	34.31	34.15	58.18	25.03	24.43	35.22
Seychelles	SYC	24.83	40.52	52.15	28.01	52.47	52.82	46.93	32.63	29.95	31.77	42.56	36.77
Sierra Leone	SLE	95.08	45.65	17.36	1.91	17.58	30.57	37.7	34.74	10.97	1.95	13.26	19.72
South Africa	ZAF	98.68	81.35	35.55	39.49	70.26	86.03	38.79	51.04	55.05	37.83	52.03	46.95
Sri Lanka	LKA	25.77	16.98	21.9	38.08	31.19	48.96	34.55	25.15	46.75	42.02	27.34	35.16
St Kitts and Nevis	KNA	20.59	54.72	17.17	39.35	52.88	55.02	33.92	39.82	8.83	37.45	45.48	33.1

(*Continued*)

Table A4. (Continued).

		Panel A: CRI - PCA						Panel B: CRI - Unweighted Score					
		Health	Welfare	Finance and credit	Tax	Structural policies	Overall	Health	Welfare	Finance and credit	Tax	Structural policies	Overall
St Vincent and The Grenadines	VCT	24.69	56.49	17.17	40.57	36.78	48.11	43.78	41.19	8.83	36.47	22.58	30.57
Suriname	SUR	40.68	22.98	19.31	53.64	60.35	56.03	47.49	27.5	11.31	38.33	44.4	33.81
Tanzania	TZA	39.54	3.86	19.99	12.44	15.43	14.74	28.99	19.56	36.26	9.73	15.83	22.07
Trinidad and Tobago	TTO	61.41	54.72	43.46	100	70.2	69.77	25.95	39.82	48.89	49.64	58.59	44.58
Uganda	UGA	68.96	65.3	23.45	16.81	24.39	44.74	27.85	43.56	52.94	18.08	16.57	31.8
Uruguay	URY	84.11	88.07	40.89	59.62	47.09	84.43	33.26	55.89	61.55	42.23	42.52	47.09
Zambia	ZMB	13.37	35.48	43.62	27.39	26.04	51.53	52.37	32.91	61.87	21.56	17.02	37.15
Zimbabwe	ZWE	44.87	53.72	12.15	41.74	19.02	45.32	50.9	41.07	31.67	24.66	18.25	33.31

Panel A reports the sub-scores after the PCA, normalized in the range 0–100; the overall CRI score is also listed. Panel B reports the unweighted sub-scores and the overall CRI score. The PCA was done across three indicators for each policy area, using original data on variables as discussed in this paper. For the unweighted score, we took the simple unweighted average across the three indicators of access, short-term cover and medium- to long-term adequacy. The unweighted score was created with a slightly different strategy to examine the robustness of the broad findings.

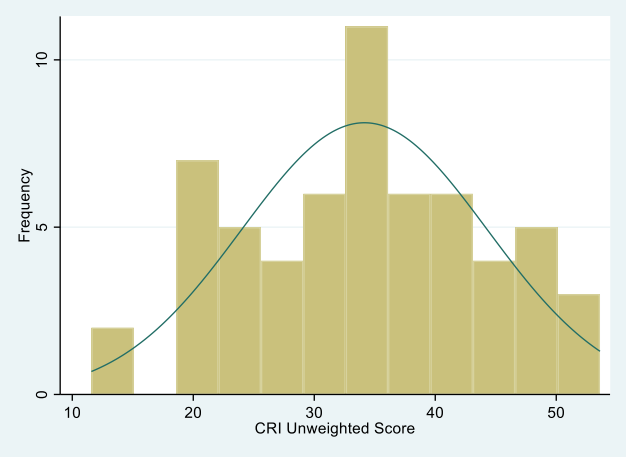

Figure A1. The COVID-19 Response Inclusiveness (CRI) Score – Unweighted Score: Histogram.

Table A5. Cross–Country OLS Regressions (Unweighted Score).

	(1)	(2)	(3)	(4)	(5)
Total Cases (in hundreds)	0.007***	0.005***	0.004***	0.002**	0.003***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Average change in mobility		−-0.525***	−0.405***	−0.253*	−0.380**
		(0.131)	(0.142)	(0.128)	(0.179)
GDP per capita ('000 constant 2010 USD)			0.404	1.094*	0.998***
			(0.353)	(0.569)	(0.260)
Informal Employment				−0.071	
				(0.140)	
Stringency Index					0.059
					(0.104)
Observations	58	40	40	30	38
R-squared	0.122	0.358	0.408	0.639	0.554

Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.