CEPR PRESS

Edited by Rabah Arezki, Simeon Djankov and Ugo Panizza

Shaping Africa's Post-Covid Recovery

CEPR

FMG FINANCIAL MARKETS GROUP Research at LSE

Shaping Africa's Post-Covid Recovery

CEPR PRESS

Centre for Economic Policy Research
33 Great Sutton Street
London, EC1V 0DX
UK
Tel: +44 (0)20 7183 8801
Email: cepr@cepr.org
Web: www.cepr.org

ISBN: 978-1-912179-41-1

Shaping Africa's Post-Covid Recovery

Edited by Rabah Arezki,
Simeon Djankov and Ugo Panizza

CEPR PRESS

FMG FINANCIAL MARKETS GROUP
Research at LSE

CENTRE FOR ECONOMIC POLICY RESEARCH (CEPR)

The Centre for Economic Policy Research (CEPR) is a network of over 1,500 research economists based mostly in European universities. The Centre's goal is twofold: to promote world-class research, and to get the policy-relevant results into the hands of key decision-makers.

CEPR's guiding principle is 'Research excellence with policy relevance'.

A registered charity since it was founded in 1983, CEPR is independent of all public and private interest groups. It takes no institutional stand on economic policy matters and its core funding comes from its Institutional Members and sales of publications. Because it draws on such a large network of researchers, its output reflects a broad spectrum of individual viewpoints as well as perspectives drawn from civil society.

CEPR research may include views on policy, but the Trustees of the Centre do not give prior review to its publications. The opinions expressed in this report are those of the authors and not those of CEPR.

Contents

Foreword

With the world still firmly in the grip of the Coronavirus pandemic, different regions face a different and yet unique set of challenges to overcome, in order to ensure adequate health and economic outcomes. While Africa has largely avoided serious health ramifications to date, countries across the continent are nonetheless experiencing mounting economic difficulties. Few governments, however, have the necessary institutional capabilities and policies in place to deal with the potential fallout. In addition, although several vaccines are starting to be commercialised and distributed among predominantly advanced economies, Africa faces considerable uncertainty on the logistical and financial challenges associated with a large vaccination campaign.

This eBook brings together some of the leading economists working on Africa to evaluate the wide-ranging impacts of the coronavirus on African economies, and to assess future policy implications. The authors focus the response of governments, firms, households and international organisations.

They highlight that African countries have common economic difficulties to overcome, which include a dependence on commodity exports, foreign direct investment, remittances and aid as well as tourism, which has been particularly devastated by the pandemic. It is also noted that, for the first time in 25 years, the continent is experiencing a recession, which is likely to compound the problems associated with recovery efforts. Africa's high incidence of poverty and debt, compared to other regions, makes addressing these issues even more challenging.

Several options are proposed to address these issues, including greater access to international finance and external debt restructuring, while governments are called upon to introduce further policies to provide household and firm-level pandemic assistance. Several chapters provide country-specific analysis, and accentuate development issues which pre-date the pandemic. Authors emphasise the need to address these concerns when planning for the post-Covid recovery.

The authors additionally caution that, with new variants of the virus emerging, Africa's population may yet feel the full force of the pandemic's health consequences. They call for decisive policy action in response to this, including the temporary suspension of patents for Covid-19 vaccines.

The challenges highlighted are undoubtedly considerable, yet not necessarily insurmountable. To ensure Africa's post-Covid economic recovery is effective and durable, regional and international cooperation is paramount. A failure to adequately deal with the issues highlighted in this eBook has the potential to reverse the economic progress made over the last few decades.

CEPR is grateful to Simeon Djankov, Ugo Panizza and Rabah Arezki for their editorship of this eBook. Our thanks also go to Anil Shamdasani for his swift and excellent handling of its production.

CEPR, which takes no institutional positions on economic policy matters, is delighted to provide a platform for an exchange of views on this important topic.

Tessa Ogden
Chief Executive Officer, CEPR
February 2021

Introduction

Rabah Arezki,[a] Simeon Djankov[b] and Ugo Panizza[c]

[a]African Development Bank, World Bank and Harvard Kennedy School; [b]Financial Markets Group, LSE and PIIE; [c]Graduate Institute Geneva and CEPR

This eBook summarises recent research on the economic effect of the Covid-19 pandemic in Africa. The chapters cover a wide array of topics focusing on the response of firms, households, governments, and international organisations.

With the exception of some flashpoints in Northern and Southern Africa, the continent has been largely spared from the direct health effect of the pandemic. However, the African economy has been significantly hurt by the economic consequences of Covid-19, which piled on other ongoing calamities such as the locust crisis devasting crops across the continent. Economies in the continent are heavily dependent on commodity exports, foreign direct investment, remittances, aid as well as tourism – a sector which has been devastated by the pandemic and is unlikely to recover quickly (Djankov 2020).

Revised growth forecasts by the African Development Bank and the International Monetary Fund show that Africa is experiencing its first recession in a quarter of a century. Over 2010–19, average real GDP growth in the African continent was close to 4%, lower than that of Asia but well above average growth in the advanced economies and in other developing and emerging economies in Europe and Latin America and the Caribbean (Table 1). Before the explosion of the pandemic, 2020–21 growth was expected to remain close to 3.5%, but the most recent forecasts suggest that the continent will have zero growth over 2020–21. Given the continent high population growth, this will lead to a 2.5% contraction in GDP per capita.

TABLE 1 AVERAGE REAL GDP GROWTH (%)

	Advanced economies	Emerging and developing economies			
		Africa	Asia	Europe	Latin America and Caribbean
2010-2019	2.01	3.9	7	3.1	2
2020-2021 (October 2019 forecasts)	1.6	3.4	5.8	2.5	2.1
2020-2021 (October 2020 forecasts)	-1.10	0	2.9	0	-2.5
Difference between 2019 and 2020 forecasts	2.70	3.40	2.90	2.50	4.60

Source: Own elaborations based on IMF WEO data.

While the impact of the pandemic on GDP growth is similar across world regions (for a discussion of the impact across developing regions, see Djankov and Panizza 2020), we focus on Africa because of its high prevalence of extreme poverty. Extreme poverty rates in sub-Saharan Africa dropped from about 60% in 2000 to about 40% in 2018, but the prevalence of extreme poverty in the sub-continent remains much higher than in any other part of the world. Recent estimates suggest that the region will be responsible for nearly one-third of the increase in extreme poverty associated with the pandemic (Valensisi 2020).

At the time of writing, the world is experiencing another wave of Covid-19 infections. While several vaccines are starting to be commercialised and distributed globally, Africa faces uncertainty over the logistical and financing challenges associated with a large vaccination campaign. COVAX – an international facility co-led by Gavi, the Coalition for Epidemic Preparedness Innovations, and the World Health Organization – aims at accelerating the production of Covid-19 vaccines and guaranteeing access for every country in the world, with the objective of vaccinating at least 20% of the population of every country by the end of 2021. The 20% target is both ambitious and underwhelming. Ambitious because of the various challenges related to the production, distribution, and financing of Covid vaccines; underwhelming because 20% of vaccinated people will not be sufficient to bring back economic activity to pre-crisis levels, even if the target is reached.

Besides logistic challenges, one key issue relates to the international pricing of vaccines (Gavi 2017). While a temporary suspension of patents could allow generics to be produced and distributed to developing countries quickly, this strategy has proven to be contentious in the past. The global community has so far been unwilling to adopt it, even if the payoff for action is large. Previous experience in fighting smallpox suggests that the benefit–cost ratio of its eradication exceeded 400 to 1 (Barrett 2007).

Beyond clearing the immediate hurdles of vaccine financing, Africa has large needs to finance its basic development plans, whether it is for health, education or infrastructure. While these development plans predate the pandemic, Covid has added urgency to these tasks.

After an initial phase of lockdowns, most African countries started preparing for a post-pandemic economic recovery characterised by eased lockdowns and fiscal stimulus measures. However, expansionary policies are constrained by debt sustainability concerns. The recent sovereign default of Zambia has propelled the issue of debt distress to the forefront of the policy debate in Africa. The nature of African debt, in particular the dependence on bilateral debt from China in some countries like Angola and Senegal, is attracting the attention of the international community with the long-term objective of fixing the international debt resolution architecture and the more immediate aim of providing the means and instruments for African economies to recover from the pandemic.

Regional policy and institutions is one way to make the continent's pent-up demand become a key driver of growth (Freund 2010, Freund and Ornelas 2010). Coordination of policies around trade, taxation and competition, but also fiscal rules, can improve economic governance. Regionalism may also be the easiest path to reduce the high level of informality among African businesses, as it will encourage trade across countries and with it the formalisation of firms (Gottlieb et al. 2020, Nonvide 2020).

A final word of caution: some political leaders in Africa may be underestimating the prospects for a delayed but massive spread of the Covid-19 virus on the continent. Existing data underestimate the disease's prevalence, and the newly found variants of the virus may lead to Africa running into further difficulties. With the rest of the world taming the disease with concerned efforts, Africa could become the new reservoir. This scenario has to be avoided with decisive policy actions.

BUSINESS AND HOUSEHOLD RESPONSES

The first part of the eBook focuses on business and household responses. It starts with a comprehensive firm-level analysis by Davies, Nayyar, Reyes, and Torres. The authors use surveys conducted by the World Bank Group to study how firms are affected by the pandemic. They find that firms in sub-Saharan Africa report a higher degree of uncertainty and worse access to government support programmes compared to firms in other emerging economies.

In the second chapter of this section, Djankov and Evans show that there is substantial heterogeneity across firms in Africa. By using simple accounting measures to estimate the share of private manufacturing firms in financial distress under a hypothetical scenario of losing half their sales, they find that larger and older firms tend to be more resilient, and that these effects are particularly important in West Africa.

In the next chapter, Byrne, Karpe, Kondylis, Lang, and Loeser focus on sectoral heterogeneity. Using high-frequency administrative tax records from Rwanda on firm sales and employment, these authors show that, while the initial shock impacted sectors in which in-person work was most necessary, the sectors in which face-to-face interactions with consumers are most necessary continue to experience a protracted recovery.

Foreign direct investments are a significant source of external finance for many African countries. Chaudhary, Santos-Paulino and Trentini show that the pandemic led to a dramatic decline in FDI flows to Africa as lockdowns slowed existing investment projects and the prospect of a protracted recession led investors to reassess new projects. There is, however, substantial heterogeneity across countries and sectors, and the authors also highlight that the Covid shock could steer policy reforms which, in turn, could unlock the potential of growth promoting regional value chains.

Several African economies are characterised by an important presence of state-owned enterprises (SOEs). In Chapter 5, Gaspar, Medas and Ralyeaargue suggest that well-run and financially sound SOEs can promote a more inclusive economic recovery. However, this positive role of SOEs requires a set of comprehensive reforms aimed at improving the transparency and accountability of their operations and of the relationship between SOEs and the government.

In Chapter 6, Arezki, Froidevaux, Huynh, Nguyen, and Salez use big data analysis to explore the effect of the pandemic on tourism in Africa – a sector upon which many countries in the continent depend heavily. The authors convincingly argue that restarting tourism is a priority for public policy and that investing in travel safety and health standards, including vaccines, will reassure international investors that Africa is open for business.

The final two chapters of this first section focus on households. Furbush, Josephson, Kilic, and Michler provide evidence on the evolving socioeconomic impacts of the pandemic among households in several African countries. They find that while households are starting to see recovery in income, business revenues, and food security, these gains have been relatively modest. Households report having received little government assistance and that their ability to cope with shocks remains limited. School closures have created a vacuum in education delivery and school-aged children have struggled to remotely receive education services.

In Chapter 8, Adjognon, Jeong, and Legovini use a panel of household surveys to show that the pandemic did not have a large impact on food security in a group of African countries. The authors argue that a relaxation of lockdown measures and, somewhat in contrast to the results of the previous chapter, a scaling-up of social protection programmes might have offered protection to vulnerable populations and provided a demand stimulus for the rest of the economy. Exploring geographical heterogeneity, the authors observe differential rural and urban trends, with rural households doing relatively better than those who reside in urban areas.

INTERNATIONAL FINANCING

The second section of the eBook focuses on access to international finance, patterns in international borrowing, and country-specific experiences.

In the first chapter of this section, Arezki explores ways in which international development banks can rethink their role in rebuilding the global economy. He points out that, as the balance sheets of multilateral and regional development banks are relatively small compared with the size of the global economy, these institutions quickly encountered limits to their abilities to deploy resources to ameliorate the consequences of the Covid pandemic. Arezki suggests that several levers, including supporting regionalisation,

upstream reforms, and accelerating resources mobilisation through a decisive shift in the financial sector incentives, could achieve better development outcomes even with limited resources.

In chapter 10, Duggan, Morris, Sandefur, and Yang compile a new dataset on World Bank lending aimed at comparing the World Bank's Covid response to its response during the global financial crisis (2009–2011). They find that lending commitments have accelerated in 2020, but actual disbursements did not grow by much and that aid remains small relative to the scale of the crisis.

About 20% of public and publicly guaranteed external debt issued by countries in sub-Saharan Africa is owed to China. This makes of China the second largest official creditor to the sub-continent (just behind the World Bank group), and for many countries in the region, China is the largest external creditor. However, not much is known about Chinese lending to Africa. In Chapter 11, Brautigam and Acker provides details on the composition of Chinese lending. They show that there are more than 30 Chinese lenders operating in the region, including at least 20 non-financial firms and nine banks. Chinese loans typically finance infrastructure, with 70% of total lending going to just four sectors: transport, electric power, communications, and water.

The pandemic has propelled the issue of debt distress to the forefront of the policy agenda. In chapter 12, Bolton, Gulati, and Panizza describe Africa's debt situation and discuss some options for providing temporary legal protection to debtor countries in the event of a global debt crisis. They provide empirical evidence suggesting that it is unlikely that their proposal, if implemented with care, would have significant negative repercussions for the functioning of the global debt market.

In chapter 13, Hausmann and Goldstein focus on the experience of three countries in sub-Saharan Africa: two middle-income countries (South Africa and Namibia) and one low-income country (Ethiopia). The authors point out that there are factors that slow down transmission of the Covid-19 in poorer countries. However, low-income countries cannot rely as much on their healthcare systems when their citizens get sick, and their governments have much smaller fiscal space to absorb tax revenue declines or to expand spending in the event of a crisis. The authors also explain that the fact that poor countries are more rural does not mean that the virus will not eventually reach there, and when it does, it will spread more easily given the larger size of the average household as well as more limited access to water and healthcare. The three cases also show the importance of international cooperation, knowledge creation, and financial support.

The final chapter in the eBook, by Professor Jamal Haidar, documents how the Covid-19 pandemic has drastically disrupted people's lives, livelihoods, and economic conditions in Egypt. The global shock has resulted in a tourism standstill, significant capital flight, and a slowdown in remittances, resulting in an urgent balance-of-payments need. Egypt responded to the crisis with a comprehensive package aimed at tackling the health emergency and supporting economic activity. The Ministry of Finance acted swiftly to

allocate resources to the health sector, provide targeted support to the most severely impacted sectors, and expand social safety net programmes to protect the most vulnerable. Similarly, the Central Bank of Egypt adopted a broad set of measures, including lowering the policy rate and postponing repayments of existing credit facilities. These measures have yielded positive responses by households and businesses, but further steps are needed to tame the virus and return the economy to a growth path.

REMAINING UNCERTAINTIES

There is much that remains uncertain in how the Covid-19 pandemic is affecting business and government finances in Africa. The major uncertainty lies in the development of the virus, with new variants emerging in several parts of the world (Brazil, South Africa, the UK). Addressing these variants of the virus may involve the use of booster vaccines, which in turn would take additional time and money. Second, the ability of governments even in advanced economies to administer the vaccine has been put to the test, so far with mixed results. This implies that various lockdowns and restrictions may be with us for many months to come. The longer the period of dealing with the virus, the more strain on households and businesses.

The second consideration is the ability of international financial markets to finance the recovery. Fiscal stimulus packages already account cumulatively for between 25% and 40% of annual GDP in G7 economies. These packages are financed with substantial borrowing, which may soon start driving up interest rates, imposing further financial burdens on developing economies. The resources of aid agencies and multilateral and regional banks are already stretched, and demand for their assistance is likely to only increase in 2021–2022. More research is needed to identify potential sources of global financing.

Third, the behaviour of commodity markets will impact the shape of the recovery in Africa. It is likely that a sustained global recovery, especially in China and India, will lead to a significant bounce back in oil and other commodities, in turn improving the African outlook. This trend may in fact delay reform to achieve diversification of the African economies. Arezki et al. (2020a) provide novel evidence that crises can be an opportunity for reforms in countries with more open societies where public debate around reforms naturally feeds into actual reforms. Covid-19 provides such an opportunity for debate on how to address the structural impediments to more prosperous societies.

Fourth, women in the workforce are particularly affected by the spread of the virus, and governments need to tailor recovery responses to ensuring that as many jobs held by women as possible are preserved. Research has emerged on why the pandemic has affected the gender gap in labour force participation, which measures the difference between the share of women employed or actively looking for work relative to the share of men. Using employment data from OECD countries, Alon et al. (2020) and Hyland et al. (2020) identify two channels through which Covid-19 has expanded the gender gap

in employment. The first is the occupation channel, with women overrepresented in the sectors hard-hit by the lockdown measures adopted to curb the spread of Covid-19. The second is the childcare channel, with the extra caregiving responsibilities brought about by school and childcare closures falling disproportionately on working mothers' shoulders. Preliminary analysis of the effect of the Covid-19 pandemic on the employment of women in African countries has also begun to emerge.

Finally, the political economy of continued Covid-related restrictions is shifting, as businesses and households are feeling financial pressures. The large share of informality in Africa makes it difficult to impose hard lockdowns also considering individuals are living from hand to mouth and are largely excluded from social protection schemes.

Advanced economies, especially in Europe where more protracted lockdowns were imposed, have faced protests. In spite of their lower infection rates, African countries could face new waves that make it more difficult to contain the virus given their limited social buffers. What's more, the global race between vaccination – to reach herd immunity – and the spread of the virus will likely cause more political turmoil as citizens demand government accountability for their response to Covid-19.

Building on existing literature, Arezki et al. (2020b) show evidence that adverse exogenous shocks, such as international commodity shocks, lead to a reversal of fortune for political incumbents. In sum, the political ramifications of Covid-19 will largely depend on the ability of governments to first and foremost to contain the virus and its socioeconomic fallout. The politics of dealing with such discontent is a fascinating new piece of the Covid recovery puzzle in Africa.

REFERENCES

Alon, T, M Doepke, J Olmstead-Rumsey and M Tertilt (2020), "This time it's different: the role of women's employment in a pandemic recession", NBER Working Paper No. 27660.

Arezki, R, S Djankov, H Nguyen, and I Yotzov (2020a), "Reform Chatter and Democracy", World Bank Policy Research Working Paper No. 9319.

Arezki, R, S Djankov, H Nguyen, and I Yotzov (2020b), "Reversal of Fortune for Political Incumbents after Oil Shocks", World Bank Policy Research Working Paper No. 9287.

Barrett, S (2017), "The smallpox eradiation game", *Public Choice* 130: 179–207.

Djankov, S (2020), "Reviving tourism in the Covid era: bungs, tax cuts and no more tour buses", LSE Blog, 17 October.

Hyland, M, S Djankov, and P Goldberg (2020), "Gendered Laws and Women in the Workforce", *American Economic Review: Insights* 2(4): 475–90.

Djankov, S and U Panizza (2020), *Covid-19 in Developing Economies*, CEPR Press.

Freund, C (2010), "Third-country Effects of Regional Trade Agreements", *The World Economy* 33(11): 1589–1605.

Freund, C and E Ornelas (2010), "Regional Trade Agreements", *Annual Review of Economics* 2(1): 139–166.

Gavi (2017), "Immunization Financing a resource guide for advocates, policymakers, and program managers".

Gottlieb, C, J Grobovöek, M Poschke and F Saltiel (2020). "Working from home: Implications for developing countries", in S Djankov and U Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

Nonvide, G (2020), "Policy for limiting the poverty impact of Covid-19 in Africa", in S Djankov and U Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

Valensisi, G (2020), "Covid-19 and global poverty: A preliminary assessment", in S Djankov and U Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

ABOUT THE AUTHORS

Rabah Arezki is Chief Economist and Vice President for Economic Governance and Knowledge Management at the African Development Bank and a Senior Fellow at the Harvard's Kennedy School of Government.

Simeon Djankov is Policy Director with the Financial Markets Group at the London School of Economics and Senior Fellow at the Peterson Institute for International Economics.

Ugo Panizza is Professor of International Economics and Pictet Chair in Finance and Development at the Graduate Institute of International and Development Studies. He is Vice President and Fellow of CEPR.

BUSINESS AND HOUSEHOLD RESPONSES

CHAPTER 1

Firms through the Covid-19 pandemic: Evidence from sub-Saharan Africa

Elwyn Davies, Gaurav Nayyar, Santiago Reyes, and Jesica Torres[1]
World Bank

INTRODUCTION

The impact of the Covid-19 pandemic on the private sector in Africa has been pronounced, posing a threat to many firms, workers, and their livelihoods. The transmission channels are manifold: public health measures have limited operations, demand from customers is lower, supply chains are disrupted, access to finance has become increasingly difficult and firms face prolonged uncertainty. Understanding how these channels have affected firms, but also how firms have adjusted is critical to design better policies to support firms through the recovery process.

This chapter presents comprehensive firm-level evidence from the Business Pulse Surveys (BPS) and Enterprise Surveys (ES) conducted by the World Bank Group across 18 countries in sub-Saharan Africa (SSA).[2] Using a globally harmonised questionnaire to assess the impact of Covid-19, firms were asked about their operating status, sales, liquidity and insolvency, labour adjustments, use of digital technologies, expectations, uncertainty, and access to government support programmes. A total of 15,819 firms were interviewed across the 18 surveyed countries in SSA.

The survey paints a worrisome picture for firms in the region. Even though the decline in sales shows a similar pattern to emerging economies in other regions, with small firms and those relying on face-to-face interactions – such as firms in hospitality, transport, and personal services[3] – being the most affected, firms in SSA are more likely to be or expect to be in arrears. They have also been more likely to lower wages, reduce working hours and lay off workers, even though – at least in the earlier phase of the pandemic – the share of layoffs has been low compared to reductions in hours and wages. Furthermore, although there are signs of firms in SSA adjusting their business models by adopting

1 The views expressed in this chapter are those of the authors and do not necessarily represent the views of the World Bank Group or its Board of Executive Directors. We would like to thank Franklin Okechukwu Maduko and Edgar Avalos for excellent research assistance, Leonardo Iacovone and Denis Medvedev for providing comments to an earlier version, and our regional and global unit colleagues for their assistance in collecting the data. In addition, we would like to thank the government agencies, statistical offices and our other partners for their role in the data collection process. A full list of acknowledgements is available in Apedo-Amah et al. (2020).
2 Globally, Business Pulse Survey (BPS) and Enterprise Survey (ES) data are available for more than 50 countries.
3 As presented in Apedo-Amah et al. (2020) for other regions.

or increasing their use of digital technologies, this is less widespread than in other regions. The outlook for firms in SSA remains grim, with many reporting a high degree of uncertainty and worse access to government support programmes compared to firms in other emerging economies.

The remainder of the chapter is structured as follows. Section 2 discusses the pulse survey data and methodology of analysis. Section 3 analyses the impact of the Covid-19 shocks on firms' sales, employment and finances. Section 4 discusses firms' expectations and uncertainty about recovery from the crisis. Sections 5 and 6 analyse how firms are adjusting using digital technologies and access to government support programmes, respectively. The final section concludes.

DATA AND METHODOLOGY

This chapter draws on business pulse surveys from 18 sub-Saharan African countries, most of them conducted between April and August 2020.[4] During this time, some countries in the sample had started relaxing initial lockdown restrictions, although some restrictions remained in place.[5] To the extent possible, firms were sampled from a listing of representative firms, based on business censuses and other firm registers maintained by statistical agencies or other government agencies. In most countries, the sample included only formal enterprises, but informal enterprises were also interviewed in Gabon, Ghana, Senegal, South Africa, and Sudan. For countries where the World Bank had recently completed an Enterprise Survey, a follow-up survey to this group of firms was conducted.

TABLE 1 COUNTRY COVERAGE AND NUMBER OF FIRMS SURVEYED IN SUB-SAHARAN AFRICA

Country	No firms	Country	No firms	Country	No firms
Chad	153	Liberia	547	South Africa	2,226
Cote d'Ivoire	604	Madagascar	943	Sudan	1,420
Gabon	915	Mali	307	Tanzania	1,000
Ghana	4,311	Niger	151	Togo	310
Guinea	150	Nigeria	2,662	Zambia	601
Kenya	2,070	Senegal	508	Zimbabwe	960

4 The survey in Nigeria was conducted between July and October 2020.
5 Due to restrictions with in-person surveys, most surveys were conducted either over the phone or online.

Given differences in country samples, implementation strategy, and timing of the surveys, we report results as conditional means and conditional likelihoods, based on regressions that control for country, sector (ten groups), firm size (four categories), and timing (i.e. number of weeks) relative to the peak of the Covid-19 shock as proxied by the lowest point in terms of mobility (based on Google Mobility Data, see Google 2020).[6] Where available, firm-level weights have been used so that results can be considered representative at the country level. For presenting cross-country results, we have adjusted the weights so that each country is equally represented, irrespective of its size or number of firms surveyed, to avoid the results being dominated by large countries in our sample.[7]

IMPACTS

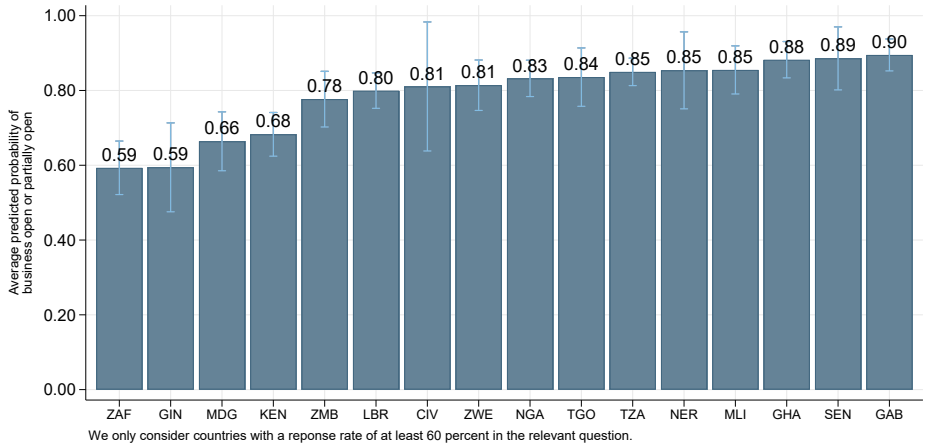
The Covid-19 outbreak led many firms to scale back operations, with large drops in sales and adjustments in employment, but also with significant degrees of heterogeneity.

Operating status

The survey shows that – despite health restrictions – the majority of firms remained fully or partially open, but many reported that they closed temporarily or permanently.

FIGURE 1 MOST BUSINESSES HAVE REMAINED OPEN OR PARTIALLY OPEN

Conditional average probability of firms being open or partially open



Note: Conditional average probabilities of being open/partially open, controlling for size, and sector, and timing of the survey. Error bars represent 95% confidence intervals. Note that the displayed conditional probabilities might differ from unconditional means reported in other sources using the same data.

6 For countries where this mobility data are not available, we use the stringency of lockdown restrictions measured by Hale et al. (2020) to obtain an estimate.

7 For countries where no sampling weights are available, an equal within-country weighting of firms is assumed. To ensure that each country has the same weight, these are rescaled so that the weights for a particular country equal 1. (For countries with equal weighting, each firm weight is equal to $1/N$, for countries with available sampling weights it equals $w_i/\Sigma_i w_i$) For cross-country comparisons, countries with more than 60% missing observations for a variable are not reported.

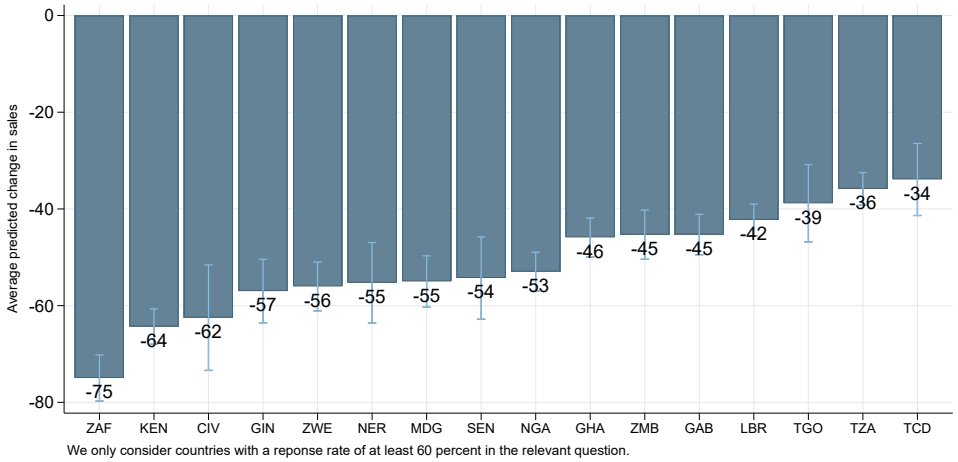
At the time of the survey, around a quarter of firms across SSA, on average, reported being closed,[8] with the remainder partially or fully open. As shown in Figure 1, the conditional likelihood of firms being fully or partially open was highest in Gabon (90%), Senegal (89%) and Ghana (88%), and lowest in South Africa (59%), Guinea (59%) and Madagascar (66%).[9]

Sales

Despite the majority of firms remaining open, businesses across SSA experienced large drops in sales. The conditional average of the decline in sales seen by firms in SSA during the 30 days prior to the interview was 49% relative to the same period of 2019, which is similar to what was seen in low- and middle-income countries (LMICs) outside of SSA (49%), but higher than in high-income countries (32%). Importantly, the impact of the shock has been persistent – substantial declines in sales are seen both in firms interviewed soon after the onset of the shock as well as those interviewed 12-16 weeks after the peak of the crisis. The conditional average of the decline in sales volume was highest in South Africa (75%), Kenya (64%) and Côte d'Ivoire (62%), and lowest in Chad (34%), Tanzania (36%) and Togo (39%) (see also Figure 2).

FIGURE 2 THE IMPACT OF THE SHOCK HAS VARIED SUBSTANTIALLY ACROSS COUNTRIES

Average percentage change in sales during the 30 days prior to the interview relative to the same period in 2019



Note: Conditional average, controlling for size, and sector, and timing of the survey. Error bars represent 95% confidence

8 This is likely to be a lower bound as it is limited to those businesses that were reached and declared they were closed. The operating status of businesses that could not be reached were not recorded and many of them could also be closed.

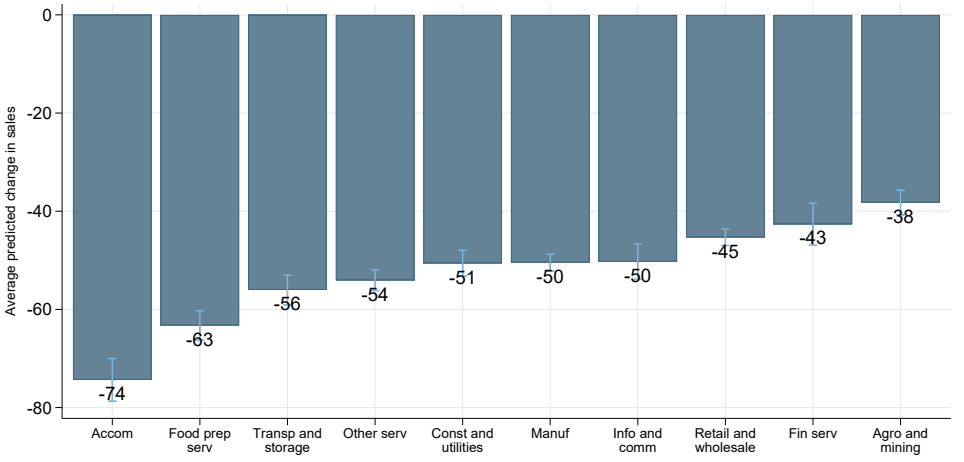
9 The percentages reported in this chapter are conditional means (average adjusted predictions) and, as discussed in the methodology section, control for differences in composition across countries. They can be interpreted as what the outcome variable is predicted to be if *all* firms in the sample had the characteristic in question (for example, if all firms in the sample were affected like firms in Gabon).

intervals. For temporarily closed firms, the change in sales equals minus 100% (permanently closed firms are not included). Note that the displayed conditional probabilities might differ from unconditional means reported in country reports.

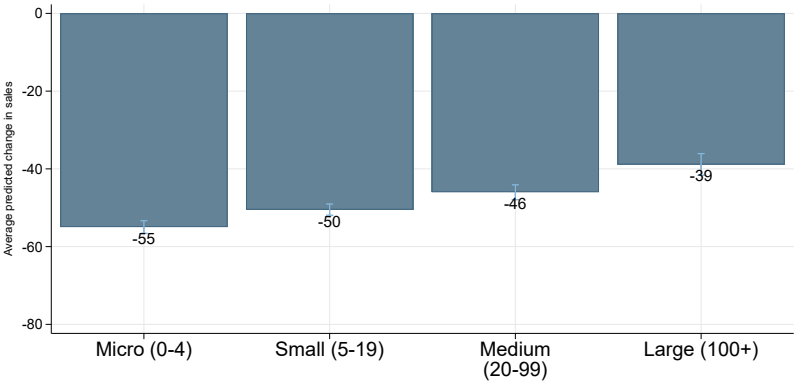
Those sectors relying on face-to-face interactions and less amenable to home-based work were most affected in terms of the decline in sales (Figure 3a), which is consistent with the findings of Gottlieb et al. (2020). Firms in these sectors experienced the largest predicted declines in sales volume, with the largest drops found in accommodation and food services (74%), food preparation (63%), transport and storage services (56%), personal services (54%), construction (51%) and manufacturing (50%). However, even sectors less reliant on in-person provision, such as ICT and financial services, experienced a decline in sales volume (respectively 38% and 50%).

FIGURE 3 FIRMS IN THE HOSPITALITY SECTOR AND SMALLER FIRMS HAVE BEEN MORE AFFECTED

(a) Differences by sector



(b) Differences by size



Note: Firms from SSA only. See also the note for Figure 2.

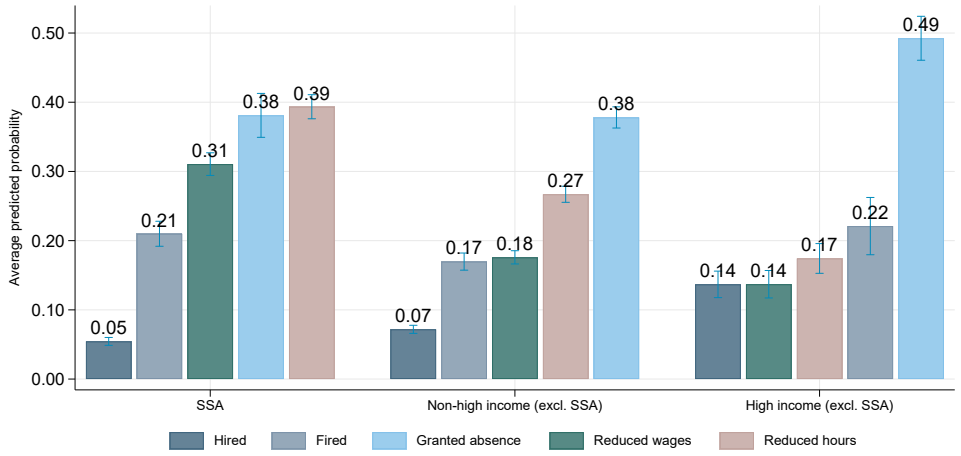
Smaller firms were more heavily impacted than larger firms (Figure 3b). The conditional average of the decline in sales was the largest for firms with fewer than five employees (55%) and the smallest for firms with more than 100 employees (39%). Evidence from Ghana, Senegal and South Africa suggests that formal and informal firms were similarly affected, when controlling for size and sector.

Employment adjustments

The adverse impact on firms' sales has had direct implications for employment. Somewhat unexpectedly, survey results show that firms are mostly holding on to workers rather than resorting to layoffs. The most likely response of firms in SSA has been to reduce the number of work hours (39%), to grant leave of absence (38%) or to reduce wages (31%). Firms have been less likely to lay off workers (21%), although the conditional likelihood of firing workers in SSA is higher than in LMICs in other regions (17%) and high-income countries (14%) (Figure 4). It is important to note that this survey was conducted in the first few months of the crisis. As the crisis prolongs, firms might have to increasingly resort to laying off workers if the reduction in demand sustains.

FIGURE 4 FIRMS HAVE BEEN MORE LIKELY TO REDUCE HOURS AND WAGES AND GRANT LEAVE, THAN FIRE WORKERS

Average adjusted probability of employment adjustments during the 30 days prior to the interview (percent)



Note: Average adjusted probabilities from Probit regressions that control for region, size, and sector, and timing of the survey. The regions in the regression are SSA, non-high-income countries excluding SSA, and high-income countries. Error bars represent 95% confidence intervals.

At the country level, layoffs were more likely in countries more affected by closures and sales declines, such as South Africa (52% of firms), Zambia (48%) and Zimbabwe (35%). Large firms were also more likely to lay off workers (26%) compared to micro-sized firms (13%), even though these firms were less likely to have closed or to have seen declines in sales.

Financial shocks

Lower demand also has ramifications for the cashflow position of firms. Our results show that firms are having trouble repaying their debts. The likelihood of a firm to be already in arrears or expecting to fall into arrears as a result of the Covid-19 shock was 53%, on average, across countries in SSA. This is much higher than the corresponding likelihood in high-income countries (36%) and LMICs outside SSA (45%). Within SSA, firms in countries with the highest reported declines in sales are also the most likely to be in arrears or expect to fall into arrears; this includes South Africa (89%), Kenya (75%), Senegal (69%) and Niger (57%).

Within countries, firms in sectors most affected by closures or declining sales volumes are also most likely to fall into arrears, such as those in accommodation (65%) and food preparation services (58%). Furthermore, the likelihood of falling into arrears decreases with size; micro and small firms are more likely to fall into arrears (with a likelihood of 53% and 51%, respectively) than large firms (with a likelihood of 40%). Regression results confirm the strong relationship between declines in sales and falling into arrears. A decline in sales of 10% is associated with an increase in the probability of 2.6% of falling (or expecting to fall) into arrears.[10]

UNCERTAINTY

Building on the method to measure uncertainty at the firm-level developed by Altig et al. (2020) and also used by the Federal Reserve Bank of Atlanta[11] in the United States, firms were asked to specify their expectations across three future scenarios: a 'regular' scenario representing the most likely case, a more pessimistic scenario, and a more optimistic scenario. Firms were also asked to provide the likelihood that each one of these three specified scenarios would occur.[12]

10 This is the result from a linear probability model regression of whether a firm has fallen (or is expecting to fall) in arrears on the percentage change in sales, country, the timing of the survey and sector (N = 4427, R-squared = 0.2258). The coefficient on percentage change in sales is -0.002658, with $p < 0.001$ and a 95% confidence interval of [-0.0030391, -0.0022125].

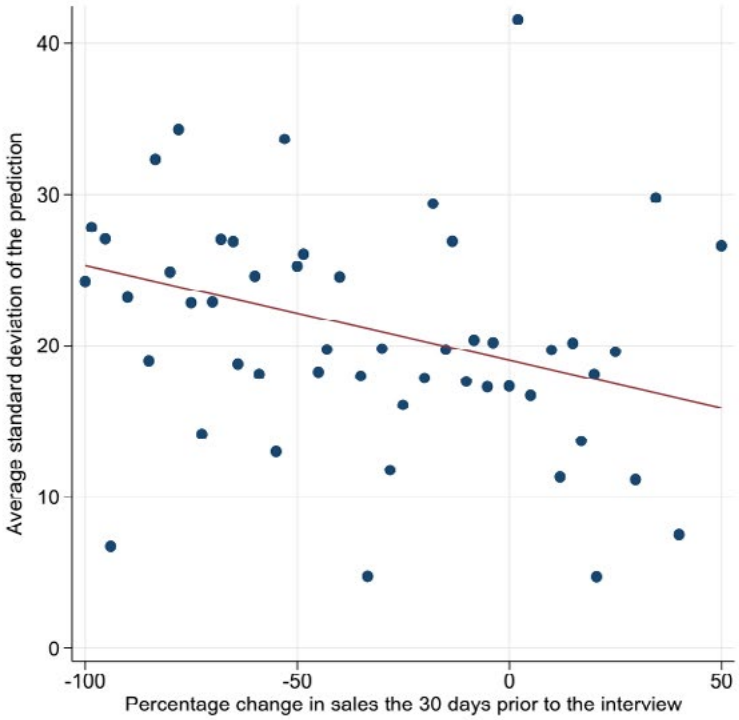
11 The measure we used in the business pulse surveys is a simplified version of the original one developed by Altig et al. (2020), designed to be applied over the phone. It asks about only three scenarios (pessimistic, regular and optimistic) instead of five. For more details about the measure and the pulse survey questionnaire see Apedo-Amah et al. (2020).

12 In the case of the United States, such measures of expectations have been shown to be highly correlated with firm growth as well as forecast errors.

The results show that firms are not only expecting continuing declines in sales (with the largest declines expected in accommodation, personal and other services and transportation), but also report a wide range between their lowest and highest projections of how sales will develop, indicating a high degree of uncertainty. This uncertainty is about 3-4 times higher than the uncertainty faced by firms in US during the same period (June 2020) and about 6-8 times the uncertainty typically faced by US firms before the Covid-19 crisis.[13] As shown in Figure 5, firms that experienced the largest percentage decline in sales tend to be more uncertain over their future sales. This finding is especially concerning because it means that Covid-19 is not only affecting firms through reduced sales, but also through increased uncertainty about the future, potentially harming investment and innovation decisions, which can lead to slower recovery.

FIGURE 5 UNCERTAINTY IS HIGHER FOR FIRMS FACING BIGGER SALES DROPS

Average standard deviation of the expected growth in sales (compared to the same period last year)



Note: Firms are asked in the survey to give sales projections under three scenarios, a regular (most likely) scenario, a more pessimistic and a more optimistic scenario. Uncertainty is measured by the standard deviation of the sales projections in these three scenarios. This measure of uncertainty is based on a measure developed by the Atlanta Federal Reserve Bank and is described in further detail in Altig et al. (2020).

13 No historical data about uncertainty are available for the countries in sub-Saharan Africa.

USE OF DIGITAL PLATFORMS

Digital technologies can enable firms to cope with uncertainty and better adjust to the Covid-19 shock in a world where social distancing precautions limit face-to-face interactions. E-commerce platforms can enable firms to maintain access to necessary intermediate inputs and a distribution network for their products (OECD 2020). Similarly, online fintech platforms can facilitate mobile payments (IMF 2020). Furthermore, online work platforms can expand opportunities for the remote delivery of computer programming and other back-office professional services such as data entry, translation and marketing (Baldwin 2019).[14]

Firms in SSA lag behind other LMICs in increasing the use of digital platforms to adjust their business models during Covid-19. The average conditional likelihood for firms starting or increasing the use of digital platforms in response to the shock in sub-Saharan Africa was 22%, compared with 32% among firms in LMICs across other regions. However, this likelihood of having started or expanded the use of digital platforms during the pandemic varies considerably across countries in SSA, ranging from 5% to 51%; in fact, it was at least as high as the average among non-SSA LMICs in Kenya (32%), Nigeria (32%), Zimbabwe (33%), Togo (43%), and South Africa (51%).

Among countries in SSA, the greater use of digital platforms was most widespread in sectors most amenable to home-based work.[15] The average conditional probability for firms starting or increasing the use of digital platforms in response to the shock in SSA was 40% in finance and ICT services, compared to less than 20% in agriculture, manufacturing, construction and accommodation services. Furthermore, the greater use of digital platforms in response to the Covid-19 shock was significantly more widespread among larger firms across countries in SSA. The average conditional likelihood of firms starting or expanding the use of digital platforms in response to the shock ranges from 17% in micro firms to 24% in small firms, 30% in medium-sized firms and 35% in large firms.

The uptake of digital platforms has also been less widespread among informal firms. In South Africa – where the overall increase in the use of digital platforms was the highest across SSA – the average likelihood of firms starting or expanding the use of digital platforms when adjusting business models during Covid-19 was 53% among formal firms, compared with 38% among informal firms. The increased take-up of digital solutions was similarly lower among informal firms in Senegal (19% versus 34%) and Ghana (9% versus 14%). This reinforces other evidence which suggests that technological sophistication

14 Kenya and Nigeria that are among the top 20 online freelancing destinations according to the University of Oxford's iLabour Project.

15 As measured in Dingel and Neiman (2020).

among firms in developing countries increases with firm size (Cirera et al. 2020). Investing in digital solutions entails a fixed cost which is likely to be especially burdensome for small and informal firms that are financially more vulnerable at present.

ACCESS TO PUBLIC SUPPORT

In response to the adverse impact of the Covid-19 shock on sales, jobs, and finances, countries have introduced a wide variety of early-stage support programmes for firms and workers to help 'keep the lights on'. These have ranged from covering wage payments (e.g. South Africa's Temporary Employer-Employee Relief Scheme) and offering subsidised loans (e.g. Ghana's Adom and Anidaso loans scheme) to allowing deferrals of tax payments. However, Cirera et al. (2020) show that despite these efforts, access to support programmes is very limited, especially in poorer countries and among smaller firms.

The average conditional likelihood of firms receiving public support issued in response to the crisis in SSA (8%) was one-seventh that in high-income countries (55%), but also one-third that in LMICs outside SSA (25%). However, this likelihood of firms receiving public support varies considerably across countries in SSA, ranging from 1% in Senegal to 22% in Kenya.[16]

Among countries in sub-Saharan Africa, the average conditional likelihood of firms receiving public support issued in response to the crisis is similar across sectors, ranging from 6% to 13%. This average likelihood is the highest in food preparation (13%) and accommodation services (11%). It perhaps reflects, at least in part, the targeting of activities intensive in face-to-face interactions with consumers – and where digital delivery is a less feasible substitute – that will likely be slower to recover as consumers continue to exercise social distancing precautions (Avdiu and Nayyar 2020).

Furthermore, access to public support programmes is more prevalent among larger firms in SSA. The average conditional likelihood of firms receiving public support issued in response to the crisis ranges from 5% in micro firms to 8% in small firms, 10% in medium-sized firms and 13% in large firms. There is also some evidence to indicate that access to public support programmes has been less widespread among informal firms, which is consistent with Nonvide (2020). In South Africa, the country with the highest reported access to public support programmes in SSA, the average probability for firms receiving public support issued in response to the crisis – accounting for country, sector, size, informality status and timing of the survey – was 19% in the formal sector compared with only 5% in the informal sector. In contrast, there were no significant differences in access to public support programmes between formal and informal firms in countries with lower access, such as Senegal and Ghana.

16 This variation may reflect the timing of the survey. Interviews in Senegal, for example, took place between the end of April and the beginning of May (28 April to 8 May), whereas businesses in Kenya were interviewed three months later (between mid-June and the end of August).

Strikingly, around two-thirds of firms in SSA cited the lack of awareness about public support programmes as the reason for no take-up, compared to 48% in LMICs in other regions and 5% in high-income countries. Another 23% of firms in SSA reported having applied for public support programmes but not having received it at the time of the survey, compared with 17% in LMICs in other regions and 4% in high-income countries. This limited awareness of government schemes and potential difficulties or delays in the process of applying for assistance in SSA can inhibit the effectiveness of public support measures for the private sector.

SUMMARY

The adverse effect of the Covid-19 crisis on firms' sales in SSA has been comparable with emerging economies in other regions. Yet, there are important differences. First, firms in SSA have been more likely to lower wages and lay off workers as well as to face financial insolvency. Second, the likelihood of firms receiving public support issued in response to the crisis in SSA is one-third that in other emerging economies, with lack of awareness about these programmes the main reason for low take-up. Third, firms in SSA lag behind other emerging economies in the use of digital platforms when adjusting their business models to Covid-19. Importantly, there are considerable differences across countries in SSA in these trends on the impact of, and adjustment to, the crisis.

Among countries in SSA, there are differences in these trends across sectors, firm size categories, and the informal-formal economy divide. Firms in sectors intensive in face-to-face interactions with consumers, such as accommodation and food services, experienced the largest decline in sales and are also more likely to fall into arrears. Access to public support programmes has been higher in these same sectors, although the adoption of digital solutions is lower because they are less amenable to home-based work.

Furthermore, smaller firms experienced larger declines in sales and are more likely to fall into arrears, although larger firms are more likely to have laid off workers. However, the decline in sales and worker layoffs are not significantly different across informal and formal firms. Last, but not least, access to public support programmes and digital solutions were less widespread among smaller and informal firms.

With lower sales, diminishing cash reserves and inadequate access to finance, firms are increasingly vulnerable. Access to public support programmes, currently least widespread in SSA, is undoubtedly the need of the hour. The continued collection of high-frequency, firm-level data can play a crucial role here by ensuring that resources are targeted to their best use when governments are fiscally constrained. The uptake of digital solutions in response to the Covid-19 shock, also currently least widespread in SSA, can be a useful complement to firm support programs. Efforts to ensure that the digital divide between SSA and the rest of the world does not widen remain crucial.

REFERENCES

Apedo-Amah, M C, B Avdiu, X Cirera et al. (2020), "Unmasking the Impact of Covid-19 on Businesses: Firm Level Evidence from Across the World", Policy Research Working Paper No. WPS9434, World Bank.

Avdiu, B and G Nayyar (2020), "When face-to-face interactions become an occupational hazard: Jobs in the time of Covid-19", *Economics Letters* 197(C).

Baldwin, R (2019), *The Globotics Upheaval: Globalisation, Robotics and the Future of Work*, Oxford University Press.

Cirera, X, D Comin, M Cruz, and K M Lee (2020), "Technology Within and Across Firms", Policy Research Working Paper No. WPS9476, World Bank.

Cirera, X, M Cruz, E Davies et al. (2020), *Policies to Support Businesses through the Covid-19 Shock: A Firm-Level Perspective*, Policy Research Working Paper No. WPS9505, World Bank.

Dingel, J and B Neiman (2020), "How many jobs can be done at home?", *Journal of Public Economics* 189.

IMF (2020), "Mobile Money in the Covid-19 Pandemic". Special Series Notes on Covid-19, 7 October.

Gottlieb, C, J Grobovöek, M Poschke and F Saltiel (2020), "Working from home: Implications for developing countries", in S Djankov and U Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

Nonvide, G (2020), "Policy for limiting the poverty impact of Covid-19 in Africa", in S Djankov and U Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

OECD (2020), "E-commerce in the time of Covid-19", OECD Policy Responses to Coronavirus (Covid-19).

ABOUT THE AUTHORS

Elwyn Davies is an Economist in the Firms, Entrepreneurship and Innovation Unit of the World Bank.

Gaurav Nayyar is a Senior Economist in the Firms, Entrepreneurship and Innovation Unit of the World Bank.

Santiago Reyes is a Research Analyst (Extended-Term Consultant) in the Firms, Entrepreneurship and Innovation Unit of the World Bank.

Jesica Torres is an Economist (Extended-Term Consultant) in the Firms, Entrepreneurship and Innovation Unit of the World Bank.

CHAPTER 2

Firms in financial distress, with an application to Africa

Simeon Djankov[a] and Jeremy Evans[b]

[a]Financial Markets Group, LSE and PIIE; [b]Princeton University

INTRODUCTION

Past financial crises have raised important questions about the proper role of government in preventing and alleviating the financial distress of private business (Djankov and Panizza 2020). Government actions to assist companies or sectors of the economy raise equity issues, as governments resort to taxing other companies to service the additional public debt resulting from this assistance. Government involvement also raises the concern that private businesses come to expect such assistance and may behave in imprudent ways, leading to future crises (Claessens et al. 2001).

Economists associate the mass distress of firms during recessions with Schumpeter's (1934) creative destruction theory, where during downturns small, less efficient, younger firms are the ones to exit the market. Their exit allows for more efficient firms to expand and prosper, lifting overall productivity.

In this chapter, we use simple accounting measures to estimate the share of private manufacturing firms under financial distress across 34 countries and 6 sectors. We use a scenario of sales falling to half of their previous year's value to calculate the share of firms in financial distress. We study the characteristics of these financially distressed firms and find that – consistent with Schumpeter's theory – young, small, domestic market oriented and single-product firms are more likely to fall into financial distress, particularly in Western Africa.

The next section describes the data. The third section surveys the literature on financial distress. The fourth section describes the methodology, estimates insolvency risk with a simple scenario of sales reaching only half of their last year's value and looks at the characteristics of financially distressed firms. The fifth section examines corporate distress in 16 African economies and finds that Schumpeter's predictions ring true in particular for Western African firms. The final section concludes.

DATA

We use firm-level data for over 11,148 firms across 34 countries to approximate the financial distress of manufacturing companies. We rely on firms' responses to various questions in the World Bank's Enterprise Surveys regarding firms' age, sales, costs, external financing, employment, export orientation and product diversification.

Each firm is coded with one of the International Standard Industrial Classification (ISIC) codes, which we group into six broader manufacturing industries: chemical manufacturing (ISIC 3.1 Rev 19-21); electronics & equipment manufacturing (26-30); leather, wood & paper manufacturing (15-17); metal manufacturing (24-25); nonmetal manufacturing (22-23); and other manufacturing (18, 31-34). Tables 1 and 2 give details on the sample by sector and by country.

We examine several firm characteristics that the previous literature relates to the likelihood to succumb to financial distress. The first proxy for firm size is the number of 'full time equivalent workers' (employees) in the previous fiscal year. This number is calculated by adding the number of full-time permanent workers and the adjusted employment of temporary workers using the average duration of a temporary contract for each firm. For the sample population of 11,148 firms, the employees' mean is 123 while the median is 30 (Figure 1).

TABLE 1 MANUFACTURING INDUSTRY SAMPLE

Sector	Sample size	Firms with full income data	Exporters
Chemical manufacturing	680	457	229
Electronics and equipment manufacturing	3,441	1,960	1,093
Leather, wood, and paper manufacturing	3,443	2,200	1,079
Metal manufacturing	1,185	738	452
Nonmetal manufacturing	418	244	77
Other manufacturing	1,981	1,109	815

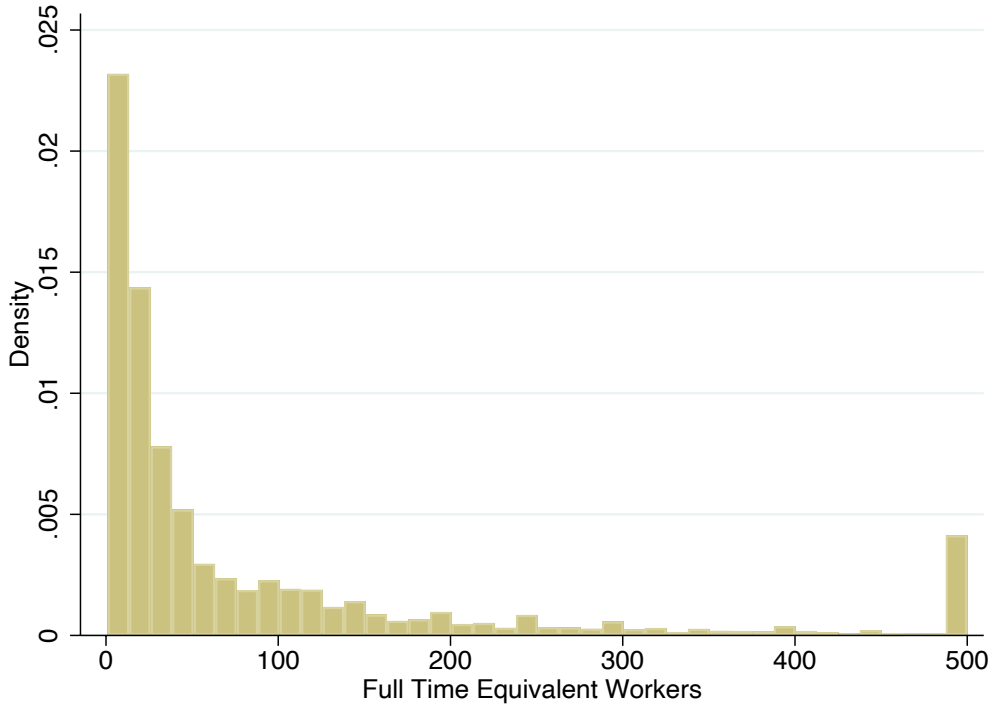
Source: World Bank's Enterprise Surveys, https://www.enterprisesurveys.org/. The sample constitutes 34 countries with surveys in the past 5 years and with a sample size above 50 firms.

TABLE 2 COUNTRY SAMPLE

Country	Survey year	Sample size	Firms with full income data	Exporters
Benin	2016	59	49	17
Bolivia	2017	109	49	27
Cambodia	2016	126	120	36
Cameroon	2016	69	32	22
Colombia	2017	547	311	182
Côte d'Ivoire	2016	87	49	32
Egypt	2016	1113	862	310
El Salvador	2016	336	207	141
Gambia	2018	57	55	8
Greece	2018	299	281	196
Honduras	2016	78	49	26
Italy	2019	436	316	225
Jordan	2019	274	59	129
Kazakhstan	2019	843	312	94
Kenya	2018	408	290	198
Kyrgyz Republic	2019	143	58	49
Liberia	2017	63	53	7
Mali	2016	73	37	29
Moldova	2019	124	90	74
Mongolia	2019	120	98	25
Morocco	2019	312	91	125
Mozambique	2018	247	213	55
Myanmar	2016	331	300	40
Nicaragua	2016	98	83	31
Portugal	2019	730	378	374
Russia	2019	789	385	188
Rwanda	2019	100	98	39
Sierra Leone	2017	59	48	8
Turkey	2019	960	499	389
Ukraine	2019	882	369	349
Uzbekistan	2019	747	447	178
West Bank/Gaza	2019	108	72	38
Zambia	2019	158	126	42
Zimbabwe	2016	263	222	62
Totals		*11148*	*6708*	*3745*

Source: World Bank's Enterprise Surveys, https://www.enterprisesurveys.org/. The sample constitutes 34 countries with surveys in the past 5 years and with a sample size above 50 firms.

FIGURE 1 DENSITY OF FIRMS' EMPLOYMENT



Source: World Bank's Enterprise Surveys, https://www.enterprisesurveys.org/. The sample constitutes 34 countries with surveys in the past 5 years and with a sample size above 50 firms.

Looking at variations by country, Gambia had the lowest average employee count with 18 workers, while Cambodia had the highest with 355. For median workers, Gambia again had the lowest with 9 workers while Morocco had the highest with 56 workers. By sector, nonmetals had the lowest average employment at 57, while other manufacturing had the highest with 155. The nonmetals sector has the lowest median number, with 18 employees, while metal manufacturing had the highest median, with 36.

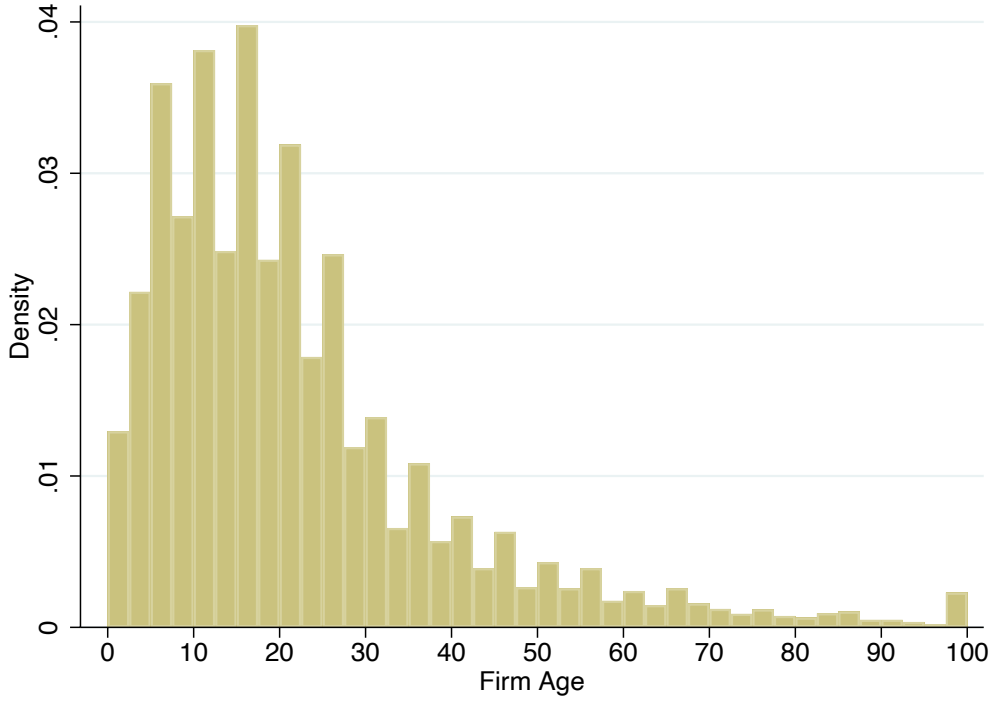
The second proxy for firm size is a firm's total sales from the previous fiscal year, expressed in local currency. Country fixed effects allow for the data to be used in cross-sectional regressions without converting to a uniform currency.

Our third variable of interest is firm age. Within the 11,148 sample observations, firms have ages clustered between 0 and 50 years, with 99% of the companies being younger than 100 years old. The average firm age is 22 years, while the median is 17 years. By country, Uzbekistan had the lowest average firm age at 12 years, while Italy had the highest average at 35 years. In terms of median age, Rwanda and Uzbekistan have the lowest age at 9 years while Italy again had the highest at 31 years (Figure 2).

By sector, other manufacturing has the lowest average firm age at 19 years while chemical manufacturing has the highest at 23 years. In terms of median firm age, other manufacturing has the lowest at 16 years, while chemical manufacturing has the highest at 19 years.

In addition to the main variables relating to firm size and age, we use two control variables to account for different aspects of firm exposure to crises: product/service diversification and reliance on exports for sales revenue. We proxy firm diversification based on survey responses to the question: "In the last fiscal year, what percent of your total annual sales came from your main product/service?". We find that the majority of firms have low levels of diversification. The sample mean for the percent of annual sales from the main business function is 88% while the median is 100%.

FIGURE 2 DENSITY OF FIRM AGE

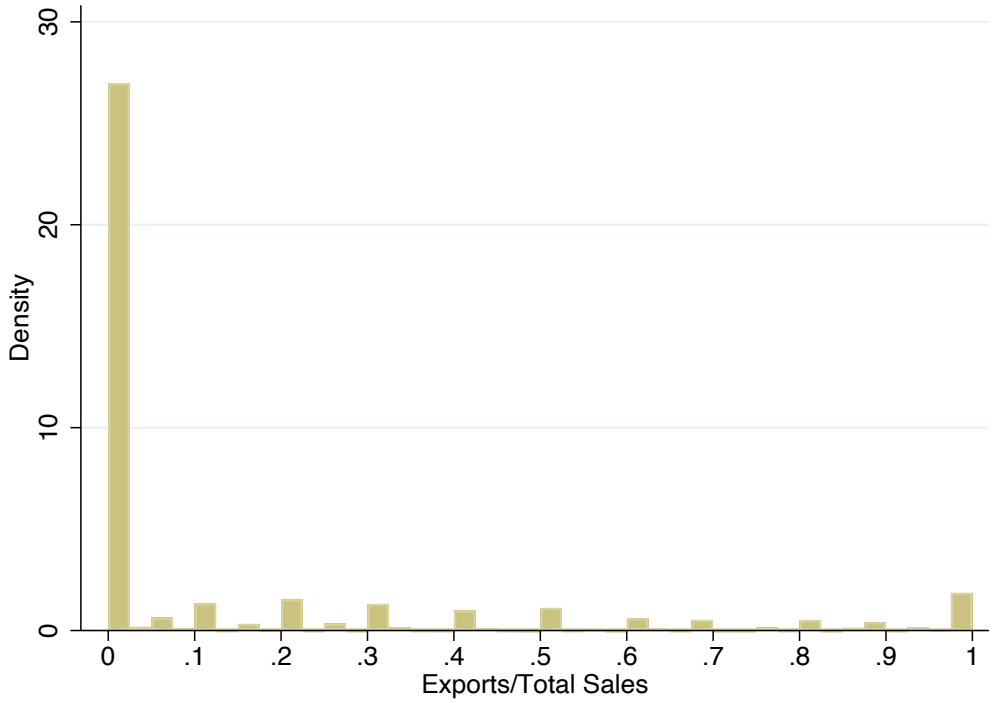


Source: World Bank's Enterprise Surveys, https://www.enterprisesurveys.org/. The sample constitutes 34 countries with surveys in the past 5 years and with a sample size above 50 firms.

For export intensity, we use firms' responses to the question: "In the last Fiscal Year, what percent of your total annual sales came from direct as well as indirect exports?". Looking at the distribution of export reliance, we see that many firms do not export at all – 50% of firms reported no exporting and the mean fraction of sales from exports is just 15%.

By country, Sierra Leone had the lowest average export reliance at 3%, while Moldova had the highest average at 39%. By sector, nonmetals had the lowest average at 6%, while other manufacturing had the highest average at 25%.

FIGURE 3 DENSITY OF FIRMS' EXPORT RELIANCE



Source: World Bank's Enterprise Surveys, https://www.enterprisesurveys.org/. The sample constitutes 34 countries with surveys in the past 5 years and with a sample size above 50 firms.

LITERATURE REVIEW

There exists a large literature on predicting corporate distress, varying by the choice of accounting or market data as well as the methodology used to forecast the likelihood and time horizon of insolvency. Beaver (1966) is the first to examine the usefulness of standard financial accounting ratios in predicting firm failure. Altman (1968) develops a widely used Z-Score for publicly traded manufacturing firms using both accounting and market data. Ohlson (1980) develops an O-score as an alternative, also using static accounting ratios for predicting insolvency. Zmijewski (1984) examines the methodological issues in the development of such prediction models based on their respective sample selection biases.

Using accounting ratios to predict bankruptcy has had a wide range of applications. Dichev (1998), for example, uses ratio predictions to show that firm bankruptcy risk is not rewarded with higher returns but rather anomalously lower returns. Griffin and Lemmon

(2002) used the O-Score to examine the relationship between book-to-market equity, distress risk and stock returns, showing that firms with high distress risk exhibit large return reversals around earnings announcement. Ferguson and Shockley (2003) also use static ratios to explore risk and average returns in the CAPM and Fama-French three factor models for publicly traded stocks.

Accounting ratios have alternatively been used to predict credit ratings, which are subjectively dependent on default probabilities provided by credit rating agencies. Kaplan and Urwitz (1979) use a linear model of accounting and market measures to predict bond ratings, often assessing the actual risk of a bond more accurately than the rating agency itself. Blume et al. (1998) use predictive ratios to show that bond rating standards became more stringent between 1978 and 1995, demonstrating that the overall downward trend in corporate bond ratings over the same period was not due solely to a deterioration in the credit quality of US corporate debt. Molina (2005) also employs ratios to show that firms are not underleveraged as the increased costs of financial distress often offset the estimates of the tax benefits of debt. Avramov et al. (2007) explore the relationship between market momentum, stock returns, liquidity and credit ratings.

Subsequent research has made significant improvements on the static ratio prediction analyses based on the O and Z-scores. Shumway (2001) estimates a dynamic hazard model using time-varying accounting and market measures, showing the benefits to accuracy of eliminating biases and overestimates that can arise from using static predictions. Chava and Jarrow (2004) expand on Shumway's dynamic hazard model by using monthly data, as well as demonstrate the importance of industry effects in predicting bankruptcy. Beaver et al. (2005) examine the effect of changes in financial reporting standards on bankruptcy prediction coefficients, showing the robustness of the hazard model to predict bankruptcies over a forty-year period. Duffie et al. (2007) emphasise the importance of considering time horizons when predicting firm failure using time-varying firm-specific and macroeconomic covariates. They find that the term structure of conditional future default probabilities depends on a firm's distance to default, its trailing stock return, general trailing market returns, and the prevailing interest rates.

The recent literature has continued to refine the predictive power of bankruptcy forecasting. Campbell et al. (2008) employ a dynamic logit model with accounting and market variables to explore the determinants of corporate failures and the pricing of financially distressed stocks whose failure probability is high. Their findings contradict the common hypothesis that value and size effects are compensation for stockholders for the risk of financial distress, as financially distressed stocks deliver lower returns with higher standard deviations, market betas, and loadings on value and small-cap risk factors.

Bharath and Shumway (2008) examine the accuracy of the Merton (1974) bond pricing model which calculates distance to default. They find that an expanded hazard model outperforms the Merton model for predicting default probabilities, and implied default

probabilities from credit default swaps and corporate bond yield spreads are only weakly correlated with the Merton probabilities. While they conclude that the Merton model does not produce sufficient statistics for the probability of default, its functional form is still useful for forecasting defaults. Agarwal and Taffler (2008) compare the effectiveness of recently developed prediction models that use a contingent claims valuation approach with the traditional Altman z-score. They find that the two approaches capture different aspects of bankruptcy risk, but the z-score leads to significantly greater bank profitability in conditions of differential decision error costs and competitive pricing regime.

Tinoco and Wilson (2013) demonstrate the efficacy of combining accounting, market-based and macro-economic data to predict financial distress for publicly listed companies. Their results compare favourably with established models that utilise neural networks as well as Altman's (1968) original z-score. Azizpour et al. (2018) study the sources of corporate default clustering in the United States. They find strong evidence that contagion between firms is a significant clustering source, with important implications for pricing and managing correlated default risk.

In sum, the literature predicting corporate distress has evolved substantially over the past half century. Still, the Altman z-score model is used widely on account for its parsimony with accounting data. This is particularly the case for privately held companies, where market data are not available.

SIMULATING CORPORATE DISTRESS

We employ Altman's (1983) version of the Z-score , as adapted for private firms. The private specification of the Z-score is an alternative to the original 1968 score that allows for the substitution of book value of equity instead of market value of equity, data available from the World Bank's Enterprise Survey. The Altman Z-Score employs seven accounting ratios: earnings before income and taxes (EBIT), total assets, net sales, the book value of equity, total liabilities, working capital, and retained earnings. It is calculated as follows:

Altman Z-Score (Private Firms) = ((EBIT/Total Assets) x 3.107) + ((Net Sales/Total Assets) x 0.998) + ((Book Value of Equity/Total Liabilities) x 0.420) + ((Working Capital/Total Assets) x 0.717) + ((Retained Earnings/Total Assets) x 0.847)

A score above 2.9 is indicative of a solvent firm. A score between 1.23 and 2.9 relates to firms that should be on alert for insolvency risk. A score below 1.23 is highly predictive of insolvency. Since we do not have access to standard balance sheets in the data, we make assumptions based on survey responses to obtain the needed ratio inputs. EBIT is calculated as the firm's total annual sales minus its total costs of goods sold. Total Assets is approximated as the sum of total sales and the market value of the firm's machinery. Net Sales uses the annual sales responses. Working Capital and Retained Earnings are both approximated as the firm's profit after taxes, the latter also assuming 10% dividends

and 15% depreciation. To calculate the firm's total debt, we utilise responses to the question: "What percent of your working capital is financed from internal funds/retained earnings?". Book Value of Equity is the difference between total assets and outstanding debt, and total liabilities is the sum of Equity and Debt.

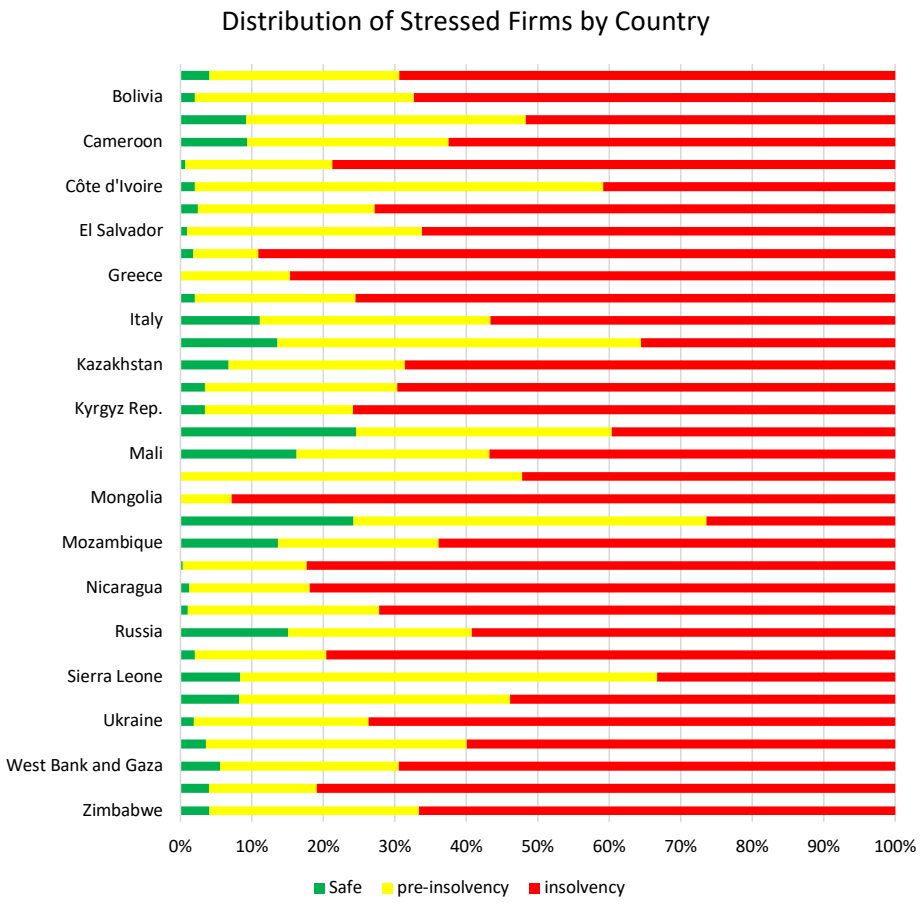
To establish a baseline of distress indicators, we examine the mean and median z-score of each industry, as well as the distribution of solvent, at risk, and insolvent firms according to Altman (1983). Electronics and equipment manufacturing and other manufacturing firms both had the highest average z-score of 1.9 while chemical manufacturing had the lowest score of 1.78. For median scores, other manufacturing had the highest score of 1.67 while metal manufacturing had the lowest score of 1.57.

We first observe that for all industries the majority of firms fall into the 'grey area' of at risk. To make comparisons across sectors of different sizes, we display the same distribution as a fraction of the total firms in each sector. Every sector had at least 20% of its firms fall under the 'at risk' category.

In economic crisis, firms face financial distress due to collapse in demand. To simulate these conditions, we assume that firms experience a 50% reduction in their sales for the duration of the year. This hypothetical temporary decline in sales in consistent with the findings in the chapter by Davies et al. in this book of the fall in revenues of African firms during the COVID 19 pandemic. We then re-examine the distribution of z-scores by sector. Figure 4 presents each country's distribution of firms' financial health based on Altman's z-score ranges, under a hypothetical scenario of a 50% reduction in sales.

We observe a decrease in z-scores and a significant increase in the concentration of firms in the insolvency range of z-scores. Every sector saw an increase in this high-risk range of z-scores approaching 40%. As a robustness check we run the same exact scenario but with only a 25% sales reduction (not reported). In this case, each sector has more than 40% of its firms insolvent.

FIGURE 4 SIMULATED INSOLVENCY BY COUNTRY (50% SALES DECLINE)



Source: World Bank's Enterprise Surveys, https://www.enterprisesurveys.org/. The sample constitutes 34 countries with surveys in the past 5 years and with a sample size above 50 firms.

We next turn to the characteristics of firms that are exposed to financial distress in the event of a temporary (but protracted) collapse in sales. Our results predict that a 1% increase in the number of a firm's Full Time Equivalent Workers increases that firm's z-score by 0.04 points even when controlling for product diversification and export reliance. Firm sales are also a highly significant indicator of health as a 1% increase predicts an increase of 0.08 points. Firm Age also appears significant at least at the 90% confidence level with a coefficient of 0.02.

While export reliance appears to be significant when observed by itself, its significance is obscured when observed simultaneously with labour and sales, which can be explained by larger firms being more efficient and having the resources and infrastructure to export more. However, when observed with firm age, its coefficient remains robust, predicting a 1% increase in export reliance leading to a 0.15 point increase in z-score. Reliance on the Main Business Line for revenue is insignificant across all specifications.

AN APPLICATION TO AFRICA

We now examine characteristics of distressed firms only within the 16 African countries in our sample. For the 2,341 firms in this sub-sample, we observe that the results for the global sample still hold but the magnitudes of each coefficient increase, suggesting an even larger Schumpeterian effect for African firms in the distressed sales environment. We see that the coefficient on Log (Employment) is higher than in the previous simulation, as African firms on average have more employees. There are increased benefits of exporting in Africa when predicting firm stability in crisis. We see approximately the same benefits of sale volume as in the global sample – with a 1% increase in sales predicting a 0.078 point increase in z-score – and the benefits of exporting continue to be obscured. The benefits of age are larger than in the full sample. Additionally, the benefits of exporting appear significantly larger too. Concentration on the main business line continued to be insignificant as a determinant of financial health as it was for the global sample.

We next divide the 16 countries in the sub-sample into three regions: North Africa (Egypt, Jordan, Morocco, West Bank & Gaza), West Africa (Benin, Cameroon, Côte d'Ivoire, Gambia, Liberia, Mali, Sierra Leone), and South/East Africa (Kenya, Mozambique, Rwanda, Zambia, Zimbabwe). We rerun the analysis with interaction terms for each region. The largest benefit for employment size comes in West African firms. Each region's coefficient for Log (Sales) is highly statistically significant, though their magnitudes are smaller. Finally, we see a difference in the significance of firm age as a determinant of health by region. Older firms have a robust advantage in West Africa, while other regions show little of this advantage.

Taken together, the evidence suggests that Schumpeter's theory of creative destruction in a distressed economic environment is particularly robust in Western Africa. Larger, older firms with more sales and high numbers of employees are predicted to fare considerably better than younger, smaller firms in this region.

CONCLUSIONS

Financial distress among private businesses comes as a consequence from economic crises. In a conservative scenario, we estimate that more than 60% of private companies could face such distress. The evidence on balance suggests that Schumpeter's theory of creative destruction in a distressed economic environment is particularly robust in Western Africa, but also holds true for a global sample of emerging and developing economies. Larger, older firms with more sales and high numbers of employees are predicted to fare considerably better than younger, smaller firms in the developing world.

The magnitude of the possible corporate insolvency dictates further government and international development institution intervention (see the chapter by Duggan et al. in this book), something that Joseph Schumpeter would have no doubt have disapproved of.

REFERENCES

Agarwal, V and R Taffler (2008), "Comparing the performance of market-based and accounting-based bankruptcy prediction models", *Journal of Banking and Finance* 32(8): 1541–1551.

Altman, E I (1968), "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy", *Journal of Finance* 23(4): 189–209.

Altman, E (1983), *Corporate Financial Distress*, Wiley Interscience.

Avramov, D, T Chordia, G Jostova, and A Philipov (2007), "Momentum and credit rating", *Journal of Finance* 62: 2503–2520.

Azizpour, S, K Giesecke, and G Schwenkler (2018), "Exploring the sources of default clustering", *Journal of Financial Economics* 129(1): 154–183.

Beaver, W H (1966), "Financial ratios as predictors of failure", *Journal of Accounting Research* 4: 71–111.

Beaver, W H, M F McNichols, and J-W Rhie (2005), "Have financial statements become less informative? Evidence from the ability of financial ratios to predict bankruptcy", *Review of Accounting Studies* 10: 93–122.

Bharath, S T and T Shumway (2008), "Forecasting default with the Merton Distance to Default Model", *The Review of Financial Studies* 21: 1339–1369.

Blume, M E, F Lim and A C MacKinlay (1998), "The declining credit quality of U.S. corporate debt: Myth or reality?", *Journal of Finance* 53: 1389–1413.

Campbell, J Y, J Hilscher, and J Szilagyi (2008), "In search of distress risk", *Journal of Finance, American Finance Association* 63(6): 2899-2939.

Chava, S and R A Jarrow (2004), "Bankruptcy prediction with industry effects", *Review of Finance* 8: 537–569.

Claessens, S, S Djankov, and A Mody (2001), "Resolution of Financial Distress: An Overview", in S Claessens, S Djankov, and A Mody (eds), *Resolution of Financial Distress: An International Perspective on the Design of Bankruptcy Laws*, World Bank.

Dichev, I (1998), "Is the risk of bankruptcy a systematic risk?", *Journal of Finance* 53: 1141–1148.

Djankov, S and U Panizza (2020), *COVID-19 in Developing Economies*, CEPR Press.

Duffie, D, L Saita, and K Wang (2007), "Multi-period corporate default prediction with stochastic covariates", *Journal of Financial Economics* 83: 635–665.

Ferguson, M F and R L Shockley (2003), "Equilibrium 'anomalies'", *Journal of Finance* 58: 2549–2580.

Griffin, J M and M L Lemmon (2002), "Book-to-market equity, distress risk, and stock returns", *Journal of Finance* 57: 2317–2336.

Kaplan, R S and G Urwitz (1979), "Statistical models of bond ratings: A methodological inquiry", *Journal of Business* 52: 231–261.

Molina, C A (2005), "Are firms underleveraged? An examination of the effect of leverage on default probabilities", *Journal of Finance* 60: 1427–1459.

Ohlson, J A (1980), "Financial ratios and the probabilistic prediction of bankruptcy", *Journal of Accounting Research* 18: 109–131.

Schumpeter, J (1934), *The Theory of Economic Development*, Harvard University Press.

Shumway, T (2001), "Forecasting bankruptcy more accurately: A simple hazard model", *Journal of Business* 74: 101–124.

Tinoco, M H and N Wilson (2013), "Financial distress and bankruptcy prediction among listed companies using accounting, market and macroeconomic variables", *International Review of Financial Analysis* 30: 394–419.

Zmijewski, M E (1984), "Methodological issues related to the estimation of financial distress prediction models", *Journal of Accounting Research* 22: 59–82.

ABOUT THE AUTHORS

Simeon Djankov is Policy Director with the Financial Markets Group at the London School of Economics and Senior Fellow at the Peterson Institute for International Economics in Washington DC.

Jeremy Evans is a member of the Class of 2021 at Princeton University majoring in Economics with a certificate in Finance.

CHAPTER 3

Sectoral heterogeneity in the Covid-19 recovery: Evidence from Rwanda

Kieran Byrne,[a] Saahil Karpe,[a] Florence Kondylis,[a] Megan Lang[b] and John Loeser[a]
[a]World Bank; [b]UC Berkeley

INTRODUCTION

The Covid-19 pandemic has been an unprecedented global crisis. While policy responses in the early months of the crisis were characterised by lockdowns to contain the spread of Covid-19, recent months have featured eased lockdowns and intervention to support particularly impacted sectors of the economy (Djankov and Panizza 2020). Understanding the impacts of the crisis and responses from policymakers is particularly important in developing countries, where poverty rates and the disease burden are relatively high (Valensini 2020).

While many of the economic impacts of the initial Covid-19 shock have been documented in developing countries (Adjognon et al. 2020, Aggarwal et al. 2020, Banerjee et al. 2020, Chiplunkar et al. 2020), there is less descriptive evidence on the ongoing transition to the Covid-19 economic recovery outside of the United States (Chetty et al. 2020).

This transition is particularly important to study in developing economies in sub-Saharan Africa, which recent projections have suggested may not have full access to a Covid-19 vaccine until 2023 (Economist Intelligence Unit 2020). Absent a widely available vaccine, the status quo of the Covid-19 economic recovery in many of these countries of eased lockdowns and ongoing Covid mortality and morbidity is likely to persist. Moreover, as the economic impacts of the Covid-19 shock were heterogeneous across sectors, the recovery is likely to be similarly uneven.

We study the economic impacts of the Covid-19 shock and recovery and shed light on sectoral heterogeneity in these impacts in the context of Rwanda. Rwanda has had well documented success in its management of the crisis and has maintained low rates of Covid-19 (Condo et al. 2020). The impacts of the recovery in Rwanda may offer a best-case scenario for other economies in sub-Saharan Africa until vaccines are widely available.

In this chapter, we leverage the universe of monthly employment and social security tax (PAYE) filings by formal employers and electronic billing machine (EBM) transactions to characterise the aggregate impacts and sectoral heterogeneity in the Covid-19 shock and recovery in Rwanda. These data allow us to document impacts at high frequency with near-universal coverage of formal economic activity. We focus our analysis on total

turnover in EBM and formal employment in PAYE, and demonstrate that our aggregate time series are comparable to national statistics on GDP and aggregate employment, respectively.

We replicate existing findings on sectoral heterogeneity in the Covid-19 shock in Rwanda and extend this work by documenting distinct patterns of heterogeneity during the recovery. First, we begin by showing that Rwanda experienced a large shock to turnover and employment, peaking in April 2020. However, by September 2020, aggregate turnover and formal employment had recovered to pre-Covid-19 levels. This suggests that Rwanda has transitioned from the initial shock, enabling us to study the Covid-19 recovery. Second, we find that the Covid-19 shock was particularly large in sectors where in-person work is most necessary, mirroring evidence from richer economies (Bartik et al. 2020, Brynjolfsson et al. 2020). Third, we document a 'k-shaped' Covid-19 recovery, with some sectors that experienced the most severe contraction during the initial shock (e.g. construction) returning to pre-Covid-19 turnover and employment, while other sectors (e.g. accommodation & food) have seen turnover and employment remain persistently below pre-Covid-19 levels. This heterogeneity suggests that sectors in which face-to-face interactions with consumers are most necessary, as distinct from sectors in which in-person work is most necessary, are most likely to experience a protracted recovery (Avdiu and Nayyar 2020). Given Rwanda's success in managing Covid-19, this highlights that a similar protracted k-shaped recovery is likely across developing countries until vaccines are widely available.

DATA AND CONTEXT

We characterise the Covid-19 shock and recovery in the context of Rwanda using high-frequency data on formally registered firms. Our analysis focuses on two sources of monthly data covering from June 2019 to September 2020, obtained from the Rwanda Revenue Authority. The first source is the universe of monthly employment and social security tax filings by formal employers (PAYE), which covers 450,000 workers (13% of total employment). Firms are required to file for all employees with taxable income, or monthly income above 30,000 Rwandan francs (RwF) (US$30), or for which the firm is making a declaration for pension or other benefits. The second source is the universe of electronic billing machine (EBM) transactions made through EBM II software, covering 1.2 trillion RwF of value added annually (13% of GDP). All firms filing value added tax (VAT) declarations are required to register sales using EBM, which for firm-to-firm sales include the client's taxpayer identifier used for VAT enforcement. Firms with an annual turnover above 20 million RwF ($20,000) or quarterly turnover above 5 million RwF ($5,000) for three consecutive quarters are required to file VAT. The EBM II software itself is freely available to all taxpayers and is progressively replacing older, physical EBM machines. We aggregate these data to construct employment and turnover, respectively, at the firm-by-month level, which we use in this analysis. In PAYE, we focus on employment as an outcome, as opposed to renumeration, as it exhibits much less seasonality and

evenly weighs each worker. In EBM, we focus on turnover as an outcome, as opposed to value added, because for analysis disaggregated to sectors with monthly data, turnover exhibits less noise and seasonality than value added.

We present a brief timeline of key events and policies during the Covid shock and recovery in Rwanda. Rwanda had its first confirmed case of Covid-19 on 14 March 2020, and since then the Ministry of Health has published daily updates, with new daily cases fluctuating but almost always remaining non-zero. As new individuals continued to test positive in the days after 14 March, the prime minister announced lockdowns starting 22 March, including closing schools and non-essential shops, closing international borders, mandating work from home for non-essential workers, and prohibiting unnecessary movements and visits outside the home. A partial reopening was announced on 4 May, including a curfew from 8pm to 5am and a requirement that masks be worn in all public spaces. Some businesses – including construction, manufacturing, hotels and restaurants, and transportation – were allowed to reopen, often with additional restrictions. Since 4 May, additional restrictions have been progressively phased out (and sometimes temporarily reinstated), including allowing motorcycle taxis and travel between provinces on 2 June, places of worship reopening on 15 July, airports reopening to passenger flights on 1 August, and schools beginning a staggered reopening on 25 September.

Other aspects of the initial lockdown have persisted — for example, as of 27 November, a curfew from 10pm to 4am remained in place, and stricter curfews are planned from 15 December 2020 until 4 January 2021. In general, we interpret our results on the Covid-19 recovery as being caused by responses by firms and individuals to the combination of these policies and the overall health and economic environment.

THE COVID SHOCK AND RECOVERY IN RWANDA

Aggregate economic impacts of the shock and recovery

We begin by presenting the Covid-19 shock and recovery in aggregate statistics in Figures 1 and 2, focusing on our series of turnover and employment. However, as a large fraction of Rwandan value added and employment is in the informal sector, we also compare our time series to official national statistics from NISR. We compare our turnover series to GDP, and our employment series to employment from the nationally representative Labor Force Survey (LFS). We interpret GDP and LFS employment as the benchmark measure, and our time series of turnover and employment as proxies available at a higher frequency and at the firm level. As the national statistics are quarterly, we present our turnover and employment series both monthly and quarterly for comparison.

FIGURE 1 GDP AND TURNOVER

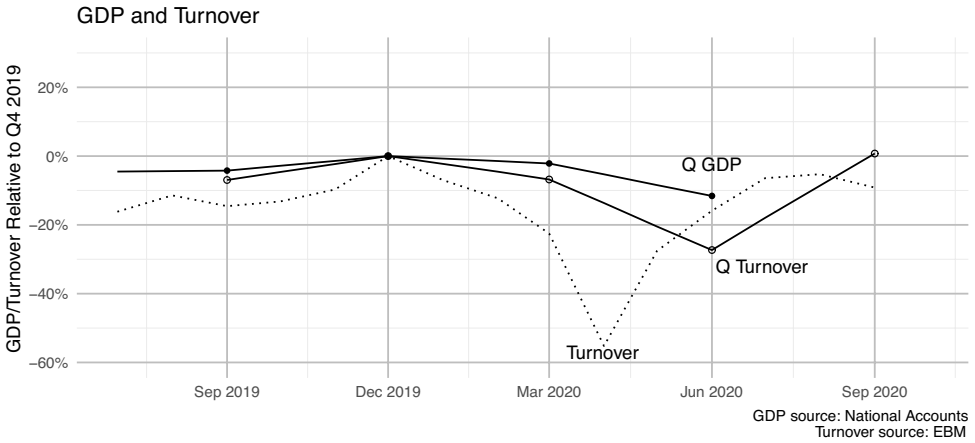
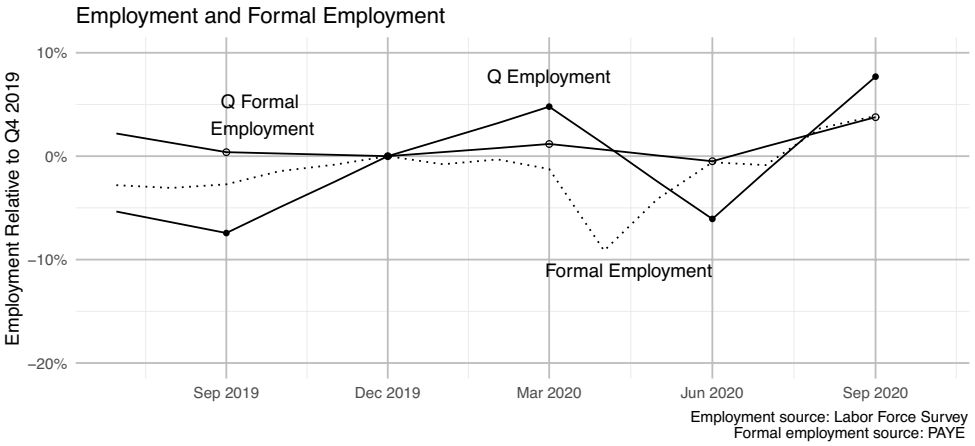


FIGURE 2 EMPLOYMENT AND FORMAL EMPLOYMENT



Using our time series, we show that the Covid-19 shock was mirrored by an equally rapid and striking recovery. In Figure 1, we show that EBM turnover fell by 55% in April 2020 relative to December 2019, but by September 2020 remained only 9% below December 2019. Similarly, in Figure 2, PAYE employment fell by 9% in April 2020 relative to December 2019, but by September 2020 was 4% above December 2019. To the extent that the magnitude and the speed of the Covid-19 shock to the Rwandan economy is surprising, we also interpret the magnitude and the speed of the Covid-19 recovery as equally surprising. However, just as the initial shock was heterogeneous in exposure across sectors, it is natural to expect that the recovery should be heterogeneous across sectors.

Lastly, we verify the external validity of our data on turnover and employment for the broader Rwandan economy. First, we compare EBM turnover and GDP in Figure 1. Comparing the quarterly series, we can see EBM turnover exhibits significantly more

fluctuations than GDP. However, much of our sample is during the Covid-19 shock and recovery, and the direct impacts of Covid-19 on economic activity may have been smaller for informal firms (particularly smallholder farmers and other rural self-employed) than for formal firms. Despite these differences, changes in quarterly turnover closely match patterns in the quarterly GDP series, with a correlation coefficient of 0.99 over the four quarters of overlapping data. We note that at the time of writing, 2020Q3 GDP statistics have not yet been released; these results suggest that GDP statistics for Q3 are likely to exhibit a strong recovery. Second, we compare employment in PAYE to employment from LFS in Figure 2. In contrast to turnover and GDP, employment in PAYE is much more stable than employment in LFS. We expect that formal employment is more likely to be full time and carries additional protections relative to informal employment, and should therefore be much more stable than employment in LFS (Nonvide 2020). Once again, despite these differences, our quarterly employment series appears to closely match patterns in the LFS, with a correlation coefficient of 0.68 over the five quarters of overlapping data.

Sectoral heterogeneity in the impacts of the shock and recovery

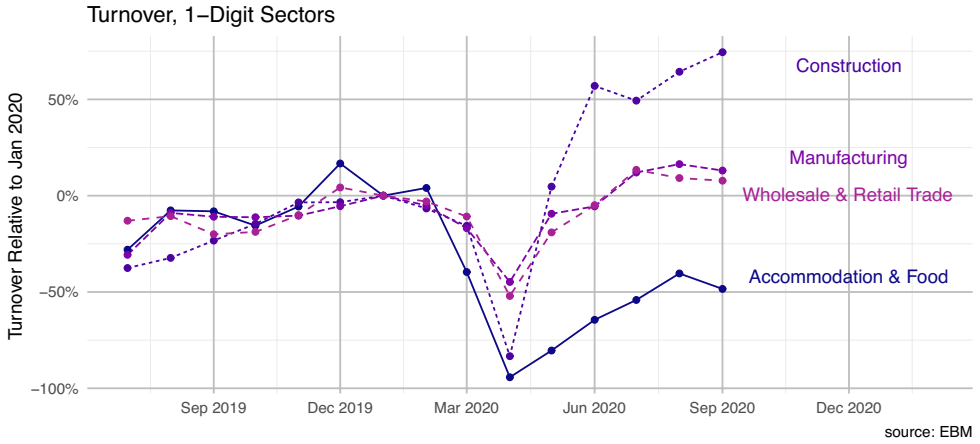
Do the aggregate impacts of the Covid-19 shock and recovery documented above mask heterogeneity? In the previous section, we noted that once aggregated to the same level, our data on turnover and employment produce similar patterns to national statistics on GDP and employment, respectively. However, these data are available at a more granular level, both over time and across firms. In this section, we use this additional granularity to characterize heterogeneity in the Covid-19 recovery in Rwanda and compare this to heterogeneity in the Covid-19 shock.

We focus on sectoral heterogeneity in the impacts of the Covid-19 shock and recovery. Specifically, we estimate monthly EBM turnover and PAYE employment, relative to January 2020, across one-digit ISIC sectors. Other firm and worker characteristics are available, allowing for greater disaggregation, and we will explore additional heterogeneity in future work. We restrict to sectors that have broad coverage both in the Rwandan economy and in the EBM and PAYE datasets, which leaves us with accommodation & food, construction, manufacturing, and wholesale & retail trade. In addition, as the public sector is an important employer in Rwanda, we separately compare public and private sector PAYE employment.

We replicate existing results by documenting meaningful sectoral heterogeneity in impacts of the Covid-19 shock. Figure 3 presents EBM turnover across one-digit ISIC sectors. We note that turnover in all four sectors appears to follow similar trends leading up to January 2020. During the Covid-19 shock, meaningful heterogeneity emerges. Turnover in accommodation & food and construction shrunk by 94% and 83%, respectively, while turnover in manufacturing and wholesale & retail trade shrunk by 45% and 52%, respectively.

A large body of analysis of this initial shock, across a range of countries, has noted that sectors for which in-person work is most necessary (accommodation & food and construction, in this case) experienced the largest initial shock (Bartik et al. 2020, Brynjolfsson et al. 2020), and what we find mirrors their results.

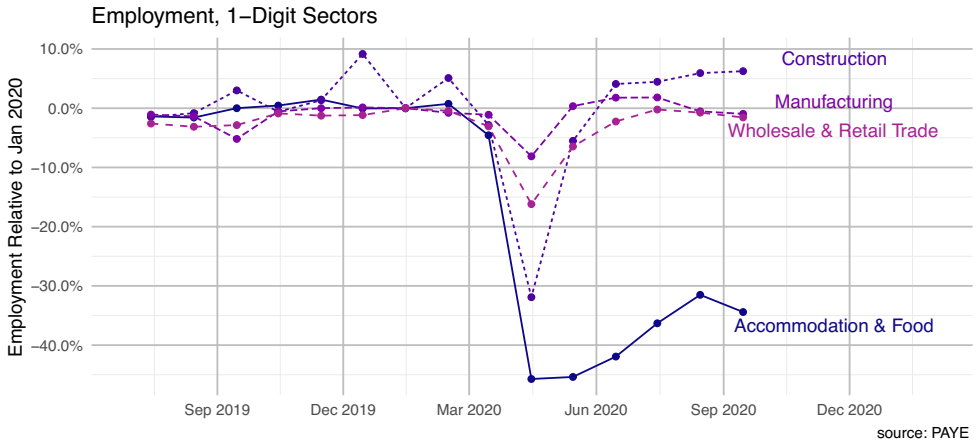
FIGURE 3 TURNOVER BY 1-DIGIT SECTOR



However, we note that sectoral heterogeneity in the Covid-19 recovery differs from sectoral heterogeneity in the Covid-19 shock. By September 2020, turnover in construction, manufacturing, and wholesale & retail trade were all above January 2020 levels. In contrast, turnover in accommodation & food remains 48% below January 2020. This suggests that while sectors in which in-person work is most necessary were most affected in the initial shock (accommodation & food and construction), sectors in which face-to-face interactions with consumers are most necessary are experiencing the most protracted recovery (Gottlieb et al 2020).

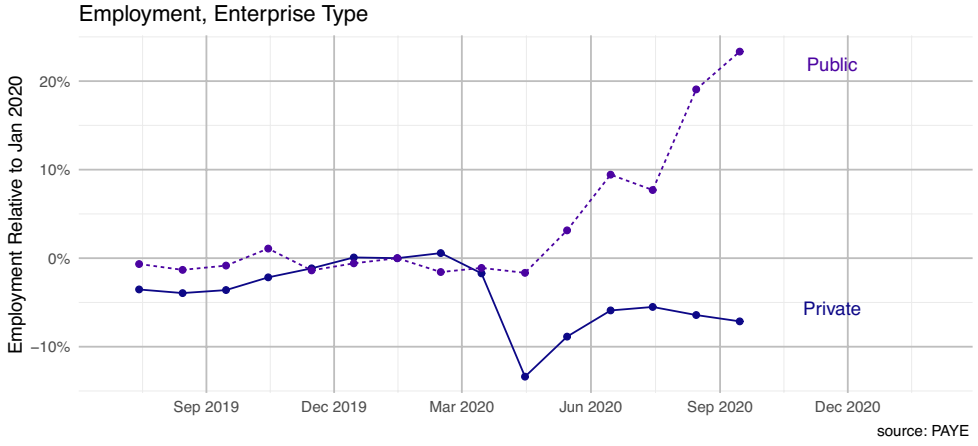
We compare sectoral heterogeneity in responses of employment to the Covid-19 shock and recovery to our results above on turnover and find broadly similar patterns. Figure 4 presents PAYE employment across one-digit ISIC sectors. The cross-sectoral patterns for employment are similar to the cross-sectoral patterns for turnover, although there are some differences in magnitudes. First, the magnitude of the Covid-19 shock was much smaller on employment than on turnover, as firms retained workers through the shock. However, the shock is still large, with April 2020 employment ranging from 8% below January 2020 levels in manufacturing to 46% below January 2020 levels in accommodation & food. Second, the recovery of employment in accommodation & food has been even slower than the recovery of turnover, as September 2020 employment has recovered only 25% of the Covid-19 shock (in contrast to 49% for turnover). This suggests that the recovery of formal employment may lag behind the recovery of turnover in the most impacted sectors. In contrast to accommodation & food, employment in construction, manufacturing, and wholesale & retail trade appears to have fully recovered.

FIGURE 4 EMPLOYMENT BY 1-DIGIT SECTOR



Lastly, we document distinct patterns of heterogeneity in the impacts of the Covid-19 shock on employment across the public and private sector. Figure 5 presents PAYE employment at public institutions and private firms. First, we find that the impacts of the Covid-19 shock on employment are concentrated in the private sector. This is consistent either with greater feasibility of remote work in the public sector or additional employment protections for public sector employees. However, during the recovery, we begin to observe the gap between changes in public sector and private sector employment growing, as the aggregate recovery in employment masks public sector employment growing by 23% and private sector employment remaining 7% below pre-Covid-19 levels. This heterogeneity highlights the direct role of fiscal stimulus in employment growth through public sector employment during the Covid-19 recovery.

FIGURE 5 EMPLOYMENT BY TYPE OF ENTERPRISE



SUMMARY

In this chapter, we leverage high-frequency administrative data to document the impacts of the Covid-19 crisis in Rwanda. We identify pronounced sectoral heterogeneity in the Covid-19 shock and recovery — while the shock was characterised by contraction in the private sector driven by sectors where in-person work is most necessary, the recovery has been characterised by public sector growth and a protracted private sector recovery in sectors where face-to-face interactions with consumers are most necessary.

We contribute by providing evidence from microdata on heterogeneity in the Covid-19 recovery in a developing country. Our findings match predictions from Avdiu and Nayyar (2020), who highlight that while the Covid-19 shock prevented in-person work, restrictions on face-to-face interactions are likely to remain even as in-person work resumes, and patterns of dependence on in-person work and face-to-face interactions vary meaningfully across sectors through the Covid-19 recovery.

Our results suggest that the protracted 'k-shaped' recovery that we document is likely to remain the status quo as long as Covid-19 economic and public health crises persist, and a sustained policy response will be necessary. On the public health side, policies and technologies that enable consumers to safely interact with firms face-to-face, and to feel safe while doing so, can tackle both of these crises. On the economic side, the dichotomous recovery across public and private sectors suggests the scaling back of fiscal stimulus caused by constrained government budgets would likely lead to reduced growth; this highlights the importance of designing cost-effective safety nets that can target affected workers and firms. As they provide detailed real-time evidence on which firms and workers are most vulnerable, data from tax administrations are a powerful tool to ameliorate these design challenges.

REFERENCES

Adjognon, G S, J R Bloem, and A Sanoh (2020), "The Coronavirus Pandemic and Food Security: Evidence from West Africa", World Bank Policy Research Working Paper No. 9474.

Aggarwal, S, D Jeong, N Kumar, D S Park, J Robinson, and A Spearot (2020), "Did Covid-19 Market Disruptions Disrupt Food Security? Evidence from Households in Rural Liberia and Malawi", NBER Working Paper 27932.

Avdiu, B, and G Nayyar (2020), "When Face-to-Face Interactions Become an Occupational Hazard: Jobs in the Time of Covid-19", *Economics Letters* 197: 109648.

Banerjee, A, M Faye, A Krueger, P Niehaus, and T Suri (2020), "Effects of a Universal Basic Income During the Pandemic", Innovations for Poverty Action working paper.

Bartik, A W, Z B Cullen, E L Glaeser, M Luca, and C T Stanton (2020), "What Jobs Are Being Done at Home During the Covid-19 Crisis? Evidence from Firm-Level Surveys", NBER Working Paper 27422.

Brynjolfsson, E, J J Horton, A Ozimek, D Rock, G Sharma, and H-Y TuYe (2020), "Covid-19 and Remote Work: An Early Look at Us Data", NBER Working Paper 27344.

Chetty, R, J Friedman, N Hendren, M Stepner and the Opportunity Insights Team (2020), "The Economic Impacts of Covid-19: Evidence from a New Public Database Built from Private Sector Data", NBER Working Paper 27431.

Chiplunkar, G, E Kelley, and G Lane (2020), "Which Jobs Are Lost During a Lockdown? Evidence from Vacancy Postings in India", Darden Business School Working Paper No. 3659916.

Condo, J, J P Uwizihiwe, and S Nsanzimana (2020), "Learn from Rwanda's Success in Tackling Covid-19", *Nature* 581(7809): 384–84.

Djankov, S, and U Panizza (eds) (2020), *Covid-19 in Developing Economies*, CEPR Press.

Economist Intelligence Unit (2020), "Rich Countries Will Get Access to Coronavirus Vaccines Earlier Than Others", 18 December.

Gottlieb, C, J Grobovöek, M Poschke and F Saltiel (2020), "Working from home: Implications for developing countries", in S Djankov and U Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

Nonvide, G (2020), "Policy for limiting the poverty impact of Covid-19 in Africa", in S Djankov and U Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

Valensisi, G 2020. "Covid-19 and global poverty: A preliminary assessment", in S Djankov and U Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

ABOUT THE AUTHORS

Kieran Byrne is a Research Assistant at Development Impact Evaluation (DIME), World Bank.

Saahil Karpe is a Research Officer at DIME, World Bank.

Florence Kondylis is a Senior Economist at DIME, World Bank.

Megan Lang is a graduate student in Agricultural and Resource Economics at UC Berkeley.

John Loeser is an Economist at DIME, World Bank.

CHAPTER 4

FDI in the recovery phase

Arslan Chaudhary, Amelia Santos-Paulino, and Claudia Trentini
UNCTAD

INTRODUCTION

The impact of Covid-19 on foreign direct investment (FDI) globally is significant. Global FDI flows in the first half of 2020 decreased by almost 50% compared to 2019. Lockdowns around the world slowed existing investment projects and the prospects of a deep recession led multinational enterprises (MNEs) to reassess new projects (UNCTAD 2020a). This chapter examines the impact of Covid-19 on cross-border private investment. It focuses on key policy issues and emerging opportunities for harnessing the potential of foreign investment for post-pandemic recovery, and for Africa's longer-term development prospects.

The Covid-19 crisis led to a severe decline in foreign investment flows to Africa in 2020, mirroring the global trend. The impact on FDI in the continent was exacerbated by demand-side constraints for commodities and low prices of natural resources. In addition, institutional constraints preclude employing economic support measures for individuals and producers. According to initial estimates, FDI to Africa declined by a fifth in 2020, with the downturn likely to persist in 2021 (UNCTAD 2021).

The pandemic implies supply, demand, and policy shocks for FDI. Demand disruptions derived from declining aggregate demand, spending responses by consumers, and investment delays by firms (Baldwin and Weder de Mauro 2020). Lower demand, reduced sales, and diminishing returns pushed many companies to the brink of bankruptcy – especially small enterprises. For larger companies and MNEs, this implied reduced retained earnings in local subsidiaries, further reducing investments in the host country.

Policy measures implemented by governments around the world during the crisis entailed new investment restrictions, which further affected cross-border investment, including inflows to Africa. Global investment flows will slowly recover, led by global value chain (GVC) restructuring for resilience, replenishment of capital stock, and recovery of the global economy (UNCTAD 2020b). This exacerbates the immediate challenges for developing economies, which are already facing an uncertain path to recovery (Djankov and Panizza 2020).

Beyond the health crisis, a persistent downturn in FDI flows to Africa can affect development prospects for the continent. First, the scenario would complicate pursuing an export-driven strategy for structural transformation. Second, it compounds existing obstacles to economic diversification, in particular away from natural resources. Finally, it leads to dwindling sources of external financial flows and can affect the already precarious balance-of-payments situation for a number of economies.

Despite challenges, there are numerous opportunities to attract FDI in Africa, and in turn to promote structural change. The Covid-19 pandemic is likely to stimulate opportunities in international production networks, with those economies most open to FDI likely to gain (Freund et al. 2020). The ongoing reconfiguration in the geography of GVCs can open new opportunities for countries in the continent. In this regard, there is scope to attract light manufacturing industries that enhance value addition of natural resources and commodities. Similarly, the growing importance of regional value chains (RVCs) can advance alongside the African Continental Free Trade Area agreement (AfCFTA) to attract FDI targeted towards regional manufacturing and market-seeking opportunities. Finally, the current situation presents an opportunity for domestic private firms in Africa to take a bigger stake in the continent's development through mobilising domestic resources, adopting new technologies and strengthening RVCs (AfDB, 2020).

The rest of the chapter proceeds as follows. The next section analyses the impact of the Covid-19 pandemic on FDI flows to Africa. The third section discusses challenges and opportunities for post-pandemic recovery. The final section concludes.

FDI TRENDS IN AFRICA AMID THE PANDEMIC

FDI inflows

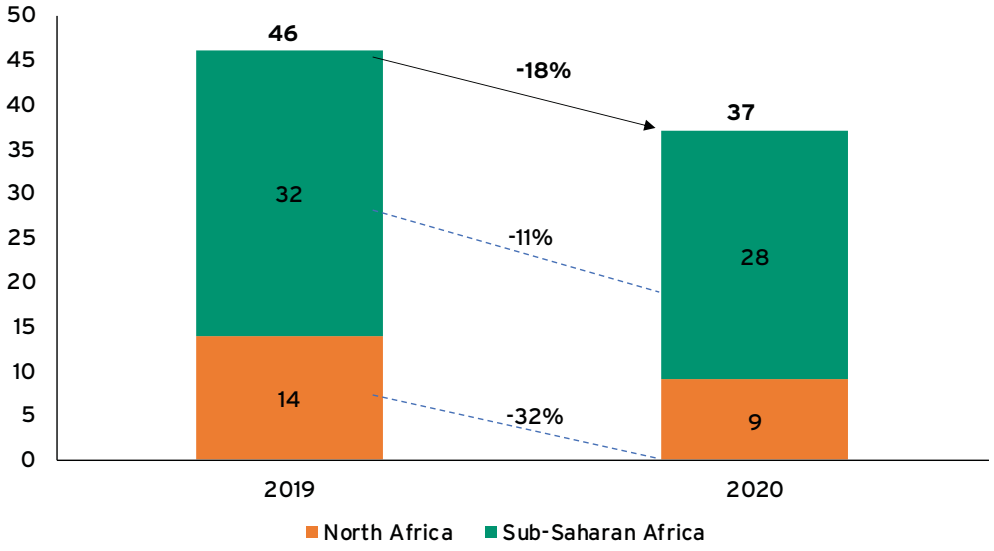
As Africa is undergoing its first recession in 25 years and GDP growth projections are steadily downgraded, FDI is being impacted significantly. Data for 2020 confirmed the immediateness of the impact, with the decline in FDI inflows to Africa higher than the average for developing regions – dropping by 18% to $38 billion compared to $46 billion in 2019. Cross-border mergers and acquisitions fell 45% to $3.2 billion from $5.8 billion in 2019. The pandemic's negative impact on FDI is being amplified due to low prices of and dampened demand for commodities, which is a key concern considering the continent's natural resource-oriented FDI profile.

In North Africa, FDI inflows fell by 32% to $9.4 billion from $13.8 billion in 2019. Egypt continued receiving the highest FDI inflows in Africa, albeit with a significant reduction (-39%) to $5.5 billion from $9.0 billion in 2019. FDI inflows to sub-Saharan Africa decreased by 11% to $28 billion, with all four sub-regions undergoing reductions. The average price of crude oil dropped by 33% in 2020[1] and this, coupled with the closure of

1 Source: World Bank Commodity Markets Outlook.

oil development sites at the start of pandemic due to movement restrictions, affected FDI to oil exporting economies. Inflows to Nigeria, for example, were down from $3.3 billion in 2019 to $2.6 billion in 2020.

FIGURE 1 AFRICA FDI INFLOWS, PRE- AND POST-COVID-19 PANDEMIC (BILLIONS OF DOLLARS)



Note: 2020 trends based on preliminary data. Expected to change when full data is available which will be published in the World Investment Report 2021.

Source: Authors' elaboration based on UNCTAD (2021).

FDI to South Africa almost halved to $2.5 billion from $4.6 billion in 2019. South Africa has borne the brunt of the pandemic in Africa, accounting for almost 40% of the continent's total number of cases and deaths and experiencing a GDP decline of about 8%, with a severe impact on FDI.[2] Heading into 2021, FDI prospects to Africa remain uncertain, with an immediate recovery unlikely. In the long term, the speed and scale of the recovery will depend on the extent to which the economic and social impact of the pandemic can be contained on the continent. Therefore, policies for socioeconomic recovery, availability of vaccines, and the scale of international support will be of critical importance in initiating a return to higher levels of investment and harnessing the potential of FDI for the post-pandemic recovery in Africa.

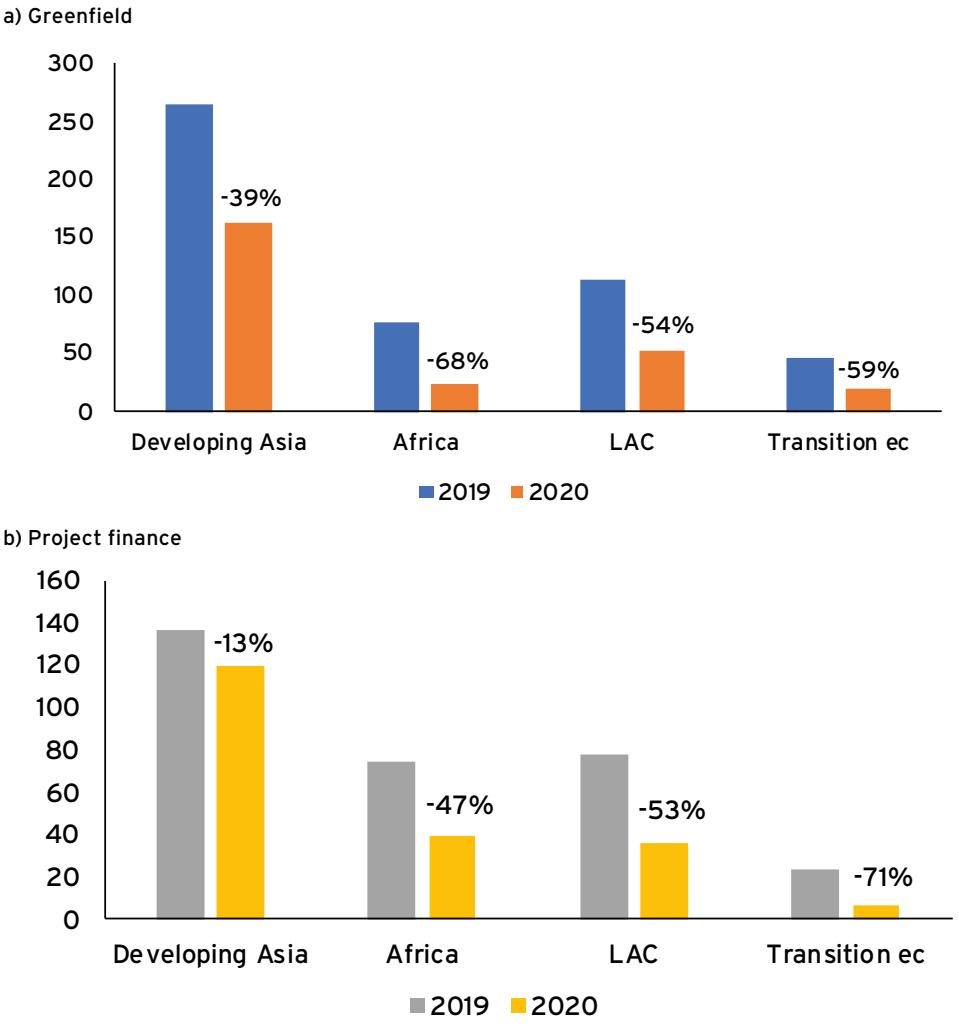
Cross-border greenfield investment and project finance

Greenfield project announcements are a key indicator of trends in cross-border investment, since they encompass new projects and plans for expansion of existing projects, and thus provide a good forecast of short-term investments. International project finance is one

2 Source: WHO Covid-19 Dashboard.

of the main sources of investment for very large-scale infrastructure projects requiring multiple investors and lenders, providing a longer-term perspective. For this reason, it is crucial for investments in vital infrastructure (including SDG-related and post-pandemic recovery) as well as for large extractives projects, but it is less relevant for manufacturing (productive) investment. Together these two forms of investment allow sectoral and bilateral private foreign investment to be analysed in more detail.

FIGURE 2 INWARD GREENFIELD INVESTMENT AND PROJECT FINANCE ACROSS DEVELOPING REGIONS, PRE AND POST COVID-19 PANDEMIC (BILLIONS OF DOLLARS)



Note: For 2020, the figure shows annualised data based on nine months data.

Source: Author's elaboration based on Financial Times Ltd, fDi Markets (Greenfield) and Refinitiv (Project finance) data.

The pandemic is severely affecting both sources of foreign investment into Africa. Announced greenfield investment fell by 68%, while project finance almost halved (Figure 2). This is comparable with flows to Latin America and the Caribbean, which are suffering similar drops. The productive and investment footprints are relatively similar across these two regions with few exceptions, mostly economies that are less diversified and largely dependent on commodities.

Greenfield project announcements

In the first three quarters of 2020, the aggregate value of announced projects contracted by almost 70% to $18 billion (Figure 2).[3] Manufacturing projects – which over the last decade represented on average about a third of the projects – declined by 80%, with flows in heavy industry sectors drying up (refining industry: -100%, basic metal products: -99%, chemicals: -93%). The services sector was relatively more resilient with a fall of about 60%, as severe declines in the hospitality industry (-90%) were partly offset by the ITC industry growing by 38% in 2020. Greenfield investment fell by 51% in sectors and industries that are key for sustainable development (Figure 3).[4]

Before the pandemic, greenfield investment in manufacturing reached 43% of total flows (45% in terms of number of projects) in 2018. Apart from the heavy industries related to the oil and refining business, the industries with increasing incoming projects include food and beverages, automotive (especially in Northern Africa and South Africa), textiles (with Ethiopia becoming a global player thanks to Chinese investors), and electronics (in Northern Africa countries and South Africa, but also in large markets such as Kenya, Angola and Nigeria).

In the last decade, the role of Chinese MNEs in Africa has grown, adding important players to the more established investors from Europe (France, the UK and Italy), the US, and South Africa (UNCTAD 2019). Chinese corporations have been investing across industries. The profile of investment ranges from extractive industries to the manufacturing sector – in particular, the textiles, automotive and electronics industries, which accounted for 15% of all projects in manufacturing projects in 2018. Chinese investors have focused on the assembly, servicing, and retailing of mobile phones, with companies such as Huawei, Xiaomi, and Oppo establishing a leadership position in the region.[5] In contrast, South African MNEs have reduced the number of new projects in the region since 2015 – the average annual number of projects from South Africa declined

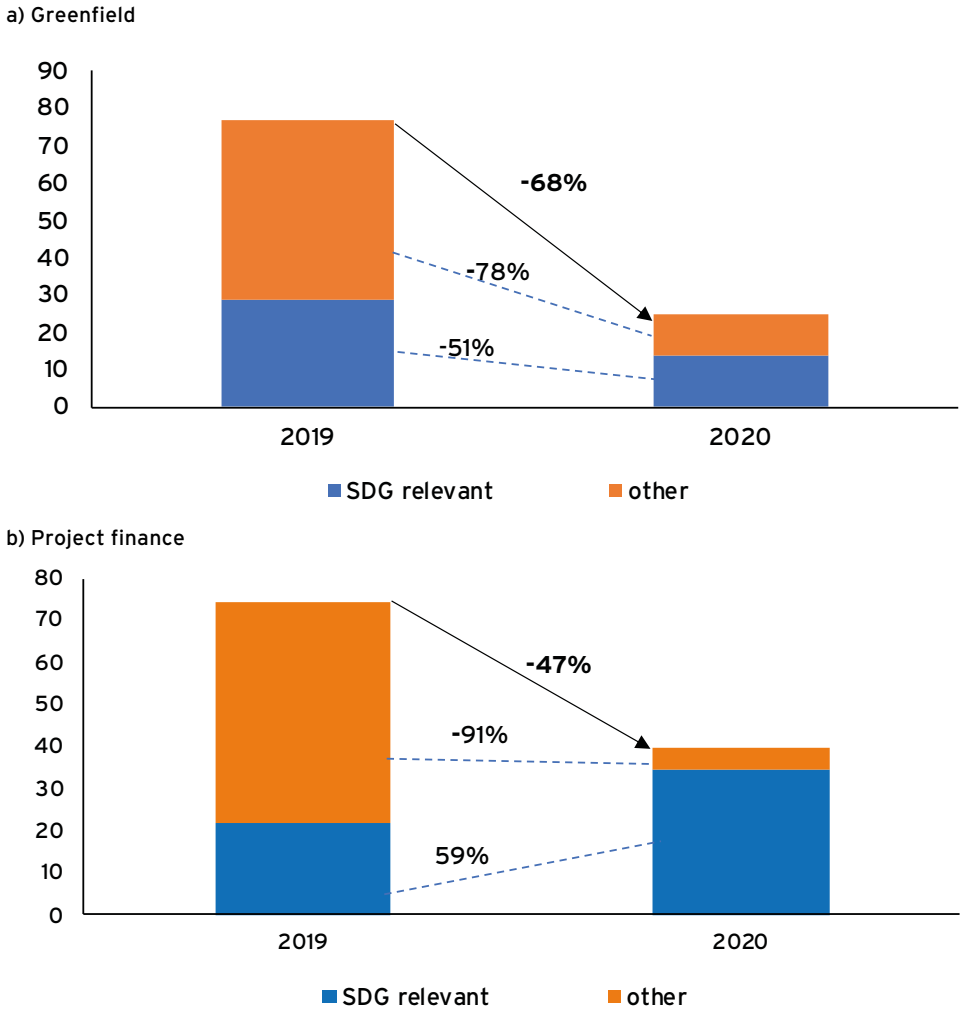
3 In comparison to 2019 three-quarters average.

4 UNCTAD identified ten SDG-relevant sectors (encompassing all 17 SDGs) in its *World Investment Report 2014*. Starting in 2019, UNCTAD' SDG Investment Trends Monitor analyses FDI in eight SDG-relevant sectors for which data are available, focusing on direct investment by private sector investors through greenfield investments (new projects and expansions by individual overseas investors) and project finance (large-scale projects, mostly in infrastructure industries, requiring multiple investors). The sectors are transport infrastructure, power generation and distribution, telecommunication, renewable energy, water, sanitation and hygiene, food and agriculture, health and education (UNCTAD 2020d).

5 Currently, Huawei equipment makes up around 70% of wireless broadband infrastructure across Africa (Bloomberg 2020).

by over 40%, from 64 in the 2010–2014 to 36 in 2015–2019. South African corporations were mostly active in the services sector, in financial and insurance activities, ITC, and professional services across the continent.

FIGURE 3 AFRICAN INWARD GREENFIELD INVESTMENTS AND PROJECT FINANCE, PRE- AND POST-COVID-19 PANDEMIC, BY INDUSTRY (BILLIONS OF DOLLARS)



Note: For 2020, the figure shows annualised data based on nine months data.
Source: Author's elaboration based on Financial Times Ltd, fDi Markets and Refinitiv data.

Project finance

In the first three quarters of 2020, cross-border project finance deals decreased by almost 50% in value (Figure 2) and by 43% in number. Deals directed towards SDG-related industries fell in number by 42% while actually increasing in value (+59%) due to the size of a few large projects in the renewable energy industry (Figure 3). Across the

industries relevant to SDGs, construction of transport infrastructure and of traditional fuel power facilities were the most affected by the Covid-19 shock, declining by 85% and 64%, respectively, in value and by about 41% each in number. The number of renewable energy projects – the most important sector for international project finance, accounting for about 38% of all deals in Africa – fell for the first time in the decade by about 46%.

Project finance deals towards extractive industries (mining, oil and gas and refining) dried up in 2020, registering aggregate declines of -93% in value and -87% in number. During 2010–2020, investment in project finance in manufacturing (mostly industrial real estate deals) accounted for only 3% of the deals in Africa, while SDG-related industries represented 67%, extractives 27%, and commercial real estate 3% of deals.

Over the last decade, the top international sponsors of projects in Africa have been corporations from the US (participating in 15% of all deals), the UK (15%) and China (14%). South African sponsors were also important, participating in 5% of deals, behind French and Australian sponsors. Sponsors differ in the industrial focus of their projects. US sponsors financed mostly renewable energy projects, sponsors from the UK spread their projects across extractives and power generation (both from traditional and renewable sources), while Chinese financiers covered more sectors and represent the most important investor for transport infrastructure (22% of the projects in this sector), real estate and industrial projects (44% of projects) on the continent.

ISSUES AND OPPORTUNITIES FOR HARNESSING THE POTENTIAL OF FDI FOR POST-PANDEMIC RECOVERY

Global trends in international production and implications for Africa

Since the 1990s, globalisation has accelerated the unbundling of ideas and production processes (Baldwin 2008). The fine-slicing of production chains and the offshoring of core MNE activities led to the rise of efficiency-seeking investment – that is, FDI that went into countries striving to benefit from factors that enable them to compete in international markets. GVCs have created broad-based gains for developing economies – either through FDI, arm's-length trade or a mode in between – but African countries have not benefited as much as others.

Covid-19 arrived on top of existing challenges arising from the New Industrial Revolution, growing economic nationalism, and the sustainability imperative – a perfect storm for the global FDI, international production, and GVC landscape (UNCTAD 2020a).[6] These changes will have profound implications for developing economies that are targeting export-oriented development policies to kickstart structural transformation and move up

6 See also McKinsey (2019).

the value addition ladder. In Africa, where commodities and low value-added activities account for the major share of exports and where export-led industrialisation policies are a key priority, the ramifications will be even more severe.

Although Africa lags behind other developing regions in integrating into GVCs, its five largest export industries are being significantly affected by lower demand for manufactured goods and services. The continent's participation in supply chains is largely as a provider of inputs in key internationalised industries, as indicated by its high rate of GVC forward participation (Table 1). The negative impact of the pandemic on FDI inflows will make it even more challenging to shift African exports from low value-added outputs to a more diversified and sophisticated export structure, which can result in industrialisation, employment generation, and sustainable economic development.

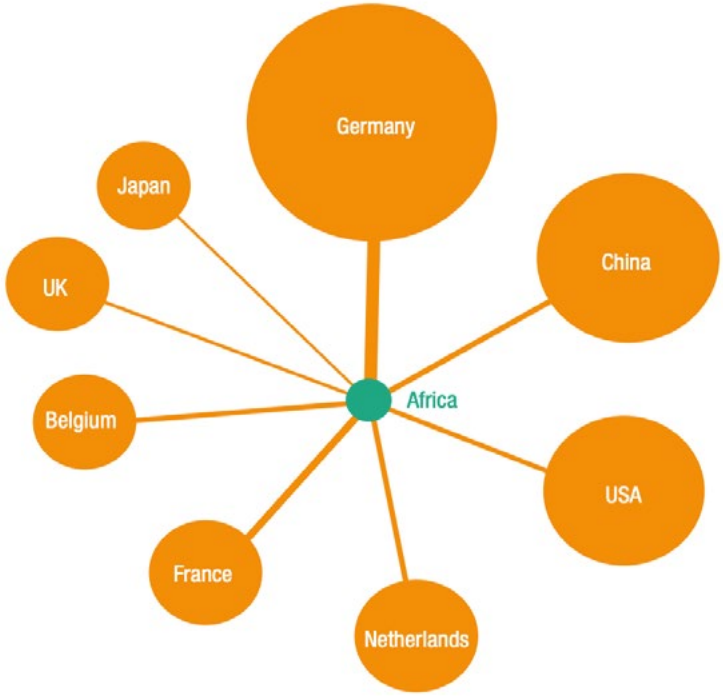
TABLE 1 AFRICA'S FIVE LARGEST EXPORT INDUSTRIES AND SHARE OF GLOBAL VALUE ADDED

Industry	Exports (share of African)	Value added in exports (share of global)	GVE forward participation	GVC backward participation
Extractive	32.8	11.3	83	17
Petroleum and chemicals	10.6	1.6	51	49
Electrical and machinery	6.6	1.9	68	32
Automotive	6.5	0.6	45	55
Agriculture	6.4	5.5	76	24

Source: UNCTAD (2020a).

As illustrated in Figure 4, Africa's share of GVC trade in relation to other major global economies remains below its potential. Also, Africa's GVC trade flows with major economies are not commensurate with total trade flows with the same economies. For example, China is Africa's largest trade partner but has a relatively low share of the continent's GVC-related trade (although the share has been growing recently). Another area where the continent is performing significantly below potential is intra-Africa trade, especially value-added trade. Flows of intra-Africa trade are minimal when compared to other developing regions, and the potential to harness the development dividends of RVCs and intra-regional investment is largely unutilised.

FIGURE 4 AFRICAN GVC PARTICIPATION AND TRADE LINKAGES



Country	GVC related trade (total, billions of US$)	GVC related trade (Africa)
Germany	1328.4	30.2
China	960.6	14.1
USA	840.8	12.1
Netherlands	641.9	12.9
France	595.8	18.2
Belgium	529.0	12.9
UK	520.8	8.8
Japan	505.9	6.8

Note: The size of circles is proportional to volume of GVC-related trade. The thickness of the lines is proportional to GVC-related trade between Africa and other economies.

Source: Authors' elaboration based on data from UNCTAD Eora database (2019)

Leveraging new opportunities to attract FDI from the transformation of value chains

FDI promotion has been considered as a key policy tool by nearly all countries in the last three decades. However, FDI is not an end in itself; the development benefits of FDI are maximised when it results in the transfer of production technology, skills, and innovative capacity. The most direct beneficiaries in this scenario are domestic firms connected to MNEs not only through ownership linkages but also through non-equity modes of production.[7] But FDI targeted exclusively towards natural resources can perpetuate resource dependency and inhibit structural transformation and overall development gains. Extant empirical evidence shows that it is more challenging for developing countries to move downstream in their export development when the production structure is dominated by raw materials than for other manufactured goods (Hausmann et al. 2008)

As discussed earlier, the Covid pandemic combined with economic, policy and sustainability megatrends could lead to a massive realignment of GVCs, as well as in the global FDI landscape. This reconfiguration of international production is likely to manifest in four distinct trajectories – reshoring, diversification, regionalisation, and replication – depending upon the starting point of individual industry archetypes.[8] Moreover, with FDI flows likely to remain subdued in the short term, the speed with which each of these trajectories manifests remains uncertain (Javorick, 2020) and hence they will play out play differently across industries and sub-regions. Nonetheless, they will result in unique challenges and opportunities for attracting FDI to African countries, and thus need to be addressed in the context of post-pandemic economic recovery policies according to their relevance.

Reshoring

In industries where labour and tax arbitrage opportunities are decreasing due to automation and policy changes, respectively, there will be a shift towards shorter, less fragmented value chains. Moreover, reshoring is the trajectory most directly related to the sustainability imperative and the pressure on MNEs to decrease the geographical footprint of production activities.

Reshoring of international production will make attracting FDI for distributed manufacturing difficult for developing countries, including those in Africa. Reshoring is mostly relevant for technology-intensive GVCs such as electronics and automotive. However, the impact of reshoring in Africa will be less evident than in other regions, since FDI towards technology-intensive manufacturing activities accounts for only a small share of total FDI flows to the continent. Nonetheless, as indicated in Table 1, Electrical and Machinery and Automotive are the third and fourth major export industries for

7 Non-equity modes of production (NEMs) include contract manufacturing, services outsourcing, contract farming, franchising, licensing, management contracts, and other types of contractual relationship through which MNEs coordinate the activities of host country firms, without owning a share in those firms.

8 These four trajectories, their specific impact mechanisms, and the impact on international production and by extension FDI are summarised in UNCTAD's World Investment Report 2020 (Figure IV.13, page 167).

Africa. Some emerging economies, including South Africa, Morocco and Egypt, have increasingly intensified their participation in these value chains. Integrating into regional value chains is a long-term policy objective for many other countries on the continent.

To mitigate the negative impact of reshoring on FDI, policymakers in Africa should strive to enact simplified and robust investment and business facilitation policy measures that not only maintain production cost advantages for firms, but also enable them to access national and regional markets in an optimal manner. Linking investment promotion policies to preferential trade agreements with developed economies – for example, the American Growth and Opportunity Act and Everything but Arms (EU) – can counterbalance the drive towards reshoring.

Diversification

Diversification will lead to a wider distribution of economic activities. It will primarily affect services and GVC-intensive manufacturing industries. In strategically important sectors, the need for supply chain resilience and enhanced geographical distribution of production activities will be increasingly important and will contribute to diversification, particularly in the current global context.

Diversification of value chains will lead to new opportunities for African countries to attract FDI in several industries, including resource-based light manufacturing, as well as strategically important industries such as pharmaceuticals and personal protective equipment. Investors seeking to diversify their supply chains and at the same time maintain production cost advantages may increasingly target African economies in these industries. Even before the pandemic, there was some evidence of large MNEs diversifying production activities, including by targeting African countries. For example, global apparel firms including PHV and H&M have set up manufacturing plants in Ethiopia in the last few years, with the objective of exporting to developed and emerging markets. However, as a result of technology advances and increasing supply chain digitalisation, the impacted industries will be more loosely governed, platform-based and asset-light, and value capture in host countries will become more difficult (UNCTAD 2020a). To benefit from diversification opportunities, African countries would need to improve the standard of infrastructure, particularly soft digital infrastructure.

Regionalisation

Regionalisation will result in a transition towards regional value chains that are shorter in production length, but not necessarily less fragmented in terms of the number of countries. Regionalisation has been driven by a shift towards more ad-hoc economic cooperation agreements by major trading partners and regional groups and a stalling of global trade liberalisation. The pandemic is also likely to facilitate regionalisation of GVCs as supply chain resilience is prioritised over an exclusive focus on labour and tax arbitrage opportunities.

Overall, regionalisation will lead to new opportunities for developing economies to attract FDI and participate in value-added activities. The main industries likely to be impacted by this trajectory include light manufacturing and natural resource-based industries. Regionalisation thus offers significant opportunities for Africa to increase its share in global FDI inflows and re-orient them towards structural transformation. To capitalise on these opportunities, African countries should target investment in broader industrial bases and clusters rather than specific activities in GVCs. In addition, removing barriers to regional trade and investment and linking investment promotion policy to the African Continental Free Trade Area Agreement (AfCFTA) could be instrumental. The agreement, which entered into force in 2020, could have a sizeable impact in terms of regional and global value chains by unlocking opportunities for intra-regional trade and investment as well as market-seeking opportunities. The trade pact would result in 90% of all goods traded enjoying a tariff-free regime from 1 January 2021 and has thus is considered a 'game changer' for the continent, with profound opportunities for investment.[9]

Replication

Replication will lead to a decrease in the length of production activities but an increase in their geographical distribution. Industries impacted by this trajectory will therefore undergo a rebundling of production activities. As automation and industry 4.0 proceeds (a transition that is being accelerated due to the pandemic), the economic benefits of the fine-slicing of production will be diminished, leading to replication of value chains. Currently, mainly hub-and-spoke and regional manufacturing industries such as light manufacturing are the most impacted by this trajectory.

Although replication will also present new opportunities for developing countries to attract FDI, the outcomes will not be automatic. For Africa to capitalise on this trajectory, upgrading infrastructure is imperative. Moreover, the promotion of industrial clustering and nurturing an adequate local manufacturing base and producer services will be critical. There is also scope for attracting regional FDI, since this trajectory is typically driven by smaller investors rather than by major MNEs. The approval of the investment protocol in AfCFTA and its timely implementation can help harness the potential opportunities for attracting investment in services and manufacturing.

Leveraging other opportunities to attract FDI to Africa

FDI to Africa and its development impact is not exclusively tied to the shift in GVCs. There are other important factors that can harness the potential of FDI to aid the post-pandemic economic recovery and resilience building. The biggest opportunity is provided by the formal implementation of AfCFTA after years of negotiations, including its investment protocol.

9 Source: Statement by the Secretary-General of the African Continental Free Trade Secretariat, Mr. Wamkele Mene (https://www.ghanaweb.com/GhanaHomePage/business/AfCFTA-a-complete-game-changer-on-the-African-continent-Secretary-General-1150763).

Currently, intra-regional FDI flows form a small share of total FDI flows for African countries. However, with the implementation of AfCFTA, there is the opportunity for countries on the continent to take first-mover advantage for both efficiency and market-seeking investment. In the short term, a successful implementation of the agreement would help cushion against the negative effects of Covid-19 on economic growth by supporting regional trade and value chains through the reduction of trade costs. In the longer term, AfCFTA would allow countries to anchor expectations by providing a path for integration and growth-enhancing reforms.

Furthermore, the pandemic has demonstrated the need for increased cooperation among trading partners. By replacing the patchwork of regional agreements, streamlining border procedures, and prioritising trade reforms, AfCFTA could help countries increase their resiliency in the face of future economic shocks (World Bank 2020). Research has hitherto focused on the impact of the agreement on trade or distributional impacts, and analysis on international investment and development is still limited. By improving market conditions, competitiveness, and business sentiment, the continental free trade agreement will stimulate FDI in Africa, thereby leading to higher investment and accelerating imports of higher-technology intermediate and capital goods, as well as improved management practices of domestic industries.

Another key opportunity for Africa to attract investment is to build on political initiatives for FDI and other forms of investment from major developed and emerging economies. The investment initiatives mostly target infrastructure projects, especially from China, and natural resources and manufacturing capacity (Table 2).

TABLE 2 MAJOR DEVELOPED AND EMERGING ECONOMIES' INVESTMENT INITIATIVES FOR AFRICA

Country	Name of initiative	Highlights	Key projects
United States	Prosper Africa Initiative (2019)	Projects in the form of equity, debt financing, risk insurance and technical development through the International Finance and Development Corporation, which has a global investment cap of $60 billion	Announcement of $5 billion in investment in Ethiopia by 2022 in newly privatized industries
China	Forum on China–Africa Cooperation (October 2010, latest summit in 2018)	$60 billion financing package, including $10 billion in private investment	$12 billion coastal railway in Nigeria, $4.5 billion Addis Ababa–Djibouti railway, and $11 billion megaport in Tanzania
United Kingdom	United Kingdom–Africa Investment Summit (January 2020)	Deals worth about $8.5 billion to set the groundwork for post-Brexit economic and investment ties between the United Kingdom and African countries	Tullow Oil announcement of investment of $1.5 billion to continue oil production in Kenya
Russian Federation	Russia–Africa Summit and Economic Forum (October 2019)	50 agreements for a total of more than $10 billion, in mainly infrastructure and natural resources development project	Announcement of $2.2 billion investment to build oil refinery in Morocco by VEB, a state development corporation
France	Choose Africa (December 2019)	$3 billion in financing for start-ups and SMEs in Africa until 2022, in the form of credit, technical support and equity financing	FISEA equity investment in Agri VIE II, a venture capital fund for agribusiness in Sub-Saharan Africa

Source: UNCTAD (2020a).

In addition to continental integration efforts, Special Economic Zones (SEZs), which have been increasing in Africa in the last few years, also present an opportunity to attract efficiency-seeking FDI and provide impetus to the post-crisis recovery. With infrastructure and institutional weaknesses widely recognised as main factors hampering economic development in Africa, the creation of such zones, which allow governments to concentrate administrative resources and infrastructure provision in confined areas, is often seen as a pragmatic solution to structural limitations.

Today, there are an estimated 237 SEZs established in Africa, although some are under construction. Moreover, there are more than 200 single-enterprise zones (or free points). SEZs are found in 38 of the 55 African Union member states, with the highest number in Kenya (UNCTAD 2019a). However, the benefits of zones and their efficacy for attracting FDI is not automatic as evidenced by a high percentage of under-utilized zones in the continent. To optimize the potential of SEZs for both the attraction of FDI and broad-based and sustainable outcomes, policymakers need to be prudent in their planning and management. To this end, a coherent policy package would include minimising initial outlays for zones, strengthening regulations for environmental and social protection, industrial targeting, and strengthening connections between zones and broader domestic industrial sectors.

CONCLUSION

Covid-19 has led to severe economic, environmental, social, and technological challenges and has demonstrated the risks of contagion across multiple dimensions in an inter-connected world. The pandemic implies both demand-side and supply-side impacts, triggering disruptions in production processes around the world. The post-pandemic recovery phase is likely to feature investment attraction in building productive infrastructure and fostering services, alongside investment in sustainable development as an integral part of development strategies.

This chapter highlights that the Covid-19 pandemic has drastically altered the global investment, trade, and policy environment and has affected the process of implementing development polices relevant to the Sustainable Development Goals. Developing countries in general, and in Africa in particular, have been negatively affected by the economic crisis prompted by the pandemic, but with considerable differences between and within countries (UNCTAD 2020c). The economic and social impact is particularly grave in structurally weak developing countries – such as those in Africa, LDCs and other structurally weak and vulnerable economies – due to their susceptibility to shocks and lower capacity to respond and adjust.

The post-pandemic recovery will be contingent on policymakers safeguarding a trade and investment policy environment that favours a gradual adjustment of international production networks. Governments in Africa and across developing countries will face the challenge of dealing with adverse developments, but at the same time will have plenty

of opportunities to capitalise on emerging avenues. The changing context of international production demands a degree of rebalancing towards growth based on regional demand and on services. AfCFTA provides opportunities for unlocking the potential of regional value chains for Africa's growth as well for increasing the continent's share of the value added in global value chains. FDI will play a pivotal role in determining the speed and scale of Africa's post-pandemic recovery.

A focus for policymakers should be attracting investment in resilient infrastructure, health services, and universal access to, and distribution of, Covid-19 vaccines. Finally, the promotion of supply chain resilience is also crucial for economic growth and job creation, and for the development prospects of low-income and vulnerable countries.

REFERENCES

African Development Bank (2020) "African Economic Conference: Experts confident of finding solutions to Covid-19 pandemic".

Baldwin, R (2008), "Managing the Noodle Bowl: The Fragility of East Asian Regionalism",' *The Singapore Economic Review* 53: 449–478.

Baldwin, R and B Weder di Mauro (2020), "Introduction", in R Baldwin and B Weder di Mauro (eds), *Economics in the time of Covid-19*, CEPR Press.

Bloomberg (2020), "Huawei strengthens its hold on Africa despite U.S.-led boycott", August.

Djankov, S and U Panizza (2020), *Covid-19 in Developing Economies*, CEPR Press.

Freund, C, A Mattoo, A Mulabdic and M Ruta (2020), "The supply chain shock from Covid-19: Risks and opportunities", in S Djankov and U Panizza (2020), *Covid-19 in Developing Economies*, CEPR Press.

Hausmann, R, B Klinger and R Lawrence (2008), "Examining Beneficiation", CID Working Paper No. 162, Harvard University Center for International Development.

Javorcik, B (2020), "Reshaping of Global Supply Chains Will Take Place, but It Will Not Happen Fast", *Journal of Chinese Economic and Business Studies* 18: 4.

McKinsey Global Institute (2019), *Globalization in Transition: The Future of Trade and Value Chains.*

UNCTAD (2019a), *World Investment Report 2019: Special Economic Zones*, United Nations.

UNCTAD (2019b), *SDG Investment Trends Monitor*, United Nations.

UNCTAD (2020a), *World Investment Report 2020: International Production Beyond the Pandemic*, United Nations.

UNCTAD (2020b) *Global Investment Trends Monitor* No. 36, United Nations.

UNCTAD (2020c), *The Impact of the Covid-19 Pandemic on Trade and Development: Transitioning to a New Normal,* United Nations.

UNCTAD (2020d) *SDG Investment Trends Monitor,* United Nations.

UNCTAD (2021) *Global Investment Trends Monitor* No 37, United Nations.

World Bank (2020), "The African Continental Free Trade Area: Economic and Distributional Effects".

ABOUT THE AUTHORS

Arslan Chaudhary is Associate Economic Affairs Officer at the Investment Issues Section of the Division on Investment and Enterprises, United Nations Conference on Trade and Development (UNCTAD).

Amelia U. Santos-Paulino is Chief of the Investment Issues Section of the Division on Investment and Enterprises, and Deputy Editor of the Transnational Corporations Journal at the United Nations Conference on Trade and Development (UNCTAD).

Claudia Trentini is Economic Affairs Officer at the Investment Issues Section of the Division on Investment and Enterprises, United Nations Conference on Trade and Development (UNCTAD).

CHAPTER 5

African state-owned enterprises: How to support the development agenda

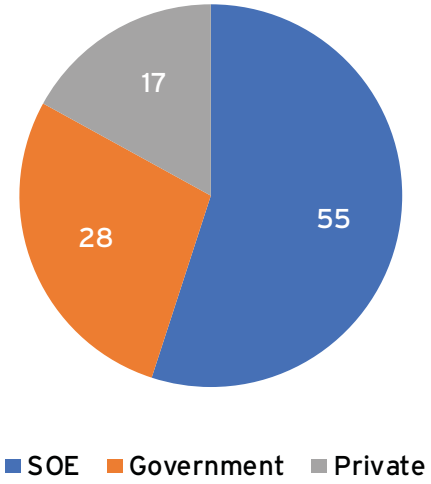
Vitor Gaspar, Paulo Medas, and John Ralyea
IMF

INTRODUCTION

The Covid-19 pandemic has brutally impacted people and firms in sub-Saharan Africa (SSA) and elsewhere. It has taken a toll on state-owned enterprises (SOE) in vital sectors as well, many of which had financial difficulties prior to the pandemic. These developments have put at risk progress towards the Sustainable Development Goals, and this agenda will need a new push once the pandemic is under control. An effective partnership between the public and the private sectors to promote higher productivity and inclusion will be instrumental for long-term growth that benefits all. The development agenda priorities in SSA are many, and include closing the infrastructure gap, addressing health and education shortcomings, strengthening governance, creating an attractive business environment, and greening the economy.

In Africa, SOEs are likely to be an important element in the broader development agenda. SOEs are present in most countries in the region, particularly in critical sectors such as energy, transportation, and water and sanitation. SOEs account for almost a third of infrastructure investment (Figure 1) and two-thirds of the power generation in SSA (IMF 2020b). State-owned airlines or railways are present in virtually all SSA countries and national oil companies dominate petroleum extraction. Prior to the pandemic, some were successful and contributed resources to the national budget. Ethiopian Airlines' performance over the last decade is notable; Mauritius Ports Authority and Namibia Power Corporation have reported steady profits. In Burkina Faso, the public water utility has been instrumental in doubling the population's access to drinking water over the past two decades by introducing a progressive tariff grid (IMF, 2015). But many have failed to achieve adequate service coverage and struggled financially, with negative ramifications for the broader economy (e.g. blackouts, low efficiency) and national budgets.

FIGURE 1. SOEs' SHARE OF INFRASTRUCTURE INVESTMENTS IN SUB-SAHARAN AFRICA



Source: World Bank (2017).

Governments will need to act ambitiously to ensure that SOEs are an engine of, and not a deterrence to, economic and social development. The next sections discuss the problems that have undermine SOEs' performance, the impact of Covid-19, and how to ensure SOEs play a positive role in the post-pandemic economic recovery.

SOEs' STRUGGLES IN THE PRE-COVID WORLD

Many SOEs across the SSA have struggled for years. SOEs have to cope with structural weaknesses such as poor ownership and oversight frameworks, unfunded policy mandates, and a lack of clear and sustainable strategies. Another problem is the existence of soft budget constraints – repeated bailouts by the government reduce the incentives for SOE managers to be efficient and may lead to a build-up of vulnerabilities, such as excessive leverage. Corruption is one of the most pernicious challenges. As a recent example, the current Angolan government claims that assets were stolen from the national oil company (Sonangol).[1] The International Consortium of Investigative Journalists has also reported suspicious financial transactions at Sonangol.[2] In South Africa, several of the largest SOEs are under investigation for corruption, with some steps being taken to attempt to recover misappropriated funds. Another example of weak governance is the unrecorded contracting by three SOEs in Mozambique of government-guaranteed debt in excess of 11% of GDP.

1 https://www.ft.com/content/5ebceb76-5e3f-4e08-98b8-3345b86a3482?segmentId=3f81fe28-ba5d-8a93-616e-4859191fabd8
2 https://www.icij.org/investigations/luanda-leaks/how-africas-richest-woman-exploited-family-ties-shell-companies-and-inside-deals-to-build-an-empire/

The generalised struggles of SOEs in the network sectors have contributed to Africa's slower-than-desired progress in the provision of basic public services. Power providers reach only 43% of the population in the region and only 28% of healthcare facilities benefit from reliable electricity; two-thirds of schools do not have reliable electricity either (Puliti and Ogunbiyi 2020). When it comes to potable water and sewerage, only 24% of the sub-Saharan Africa's population has access to safe drinking water, and only 28% have basic sanitation facilities that are not shared with other households (United Nations 2019). A common problem is that many public utilities charge below-cost tariffs, reducing the capacity of the utility to operate and invest (World Bank 2004, 2019). There is growing awareness of the need for a more sustainable strategy based on a higher degree of cost recovery and improving efficiency and services, while safeguarding provision to the poor.

Not surprisingly, the structural weaknesses also undermined SOEs pre-pandemic financial performance. One snapshot, based on a sample of countries for which some information is available, indicates that SOE revenues average 7% of GDP, expenditure 8% of GDP, and losses about 1% of GDP.[3] This can give rise to a need for sustained and significant bailouts. In South Africa, the debt of a single SOE, ESKOM, is about 10% of GDP, of which 80% is guaranteed by government, and the company's direct cost to the budget (including planned transfers), is estimated at over 9% of GDP since 2008-09. In Zimbabwe, SOEs accumulated losses of about 2.8% of GDP from 2011 to 2014, which added to government transfers to the sector totalling 7.8% of GDP.

SOEs' financial problems can spread throughout the economy. SOEs commonly have substantial financial interlinkages between themselves, public banks, and the government, with large crossholdings of assets and liabilities, frequently arrears. Where these crossholdings exist, financial or liquidity challenges faced by one area of the public sector could cascade through the rest of the public sector, as has been illustrated by stress tests carried out by the IMF in some countries. In the Gambia, defaulted crossholdings resulted in national water and electricity company being unable to service its debt to the banking sector, causing the supporting government guarantee to be called.

Sub-Saharan governments have made numerous attempts to reform illiquid and loss-making state-owned enterprises. The most visible reforms tend to be the sale of the SOE to private interests or reforms that introduce private sector involvement into the SOE. The airline sector is replete with examples. Since the 1990s, SSA governments have closed or privatised at least 25 national airlines. Some airlines have been renationalised (Kenya Airways, Air Tanzania); some closed ones (e.g. Ugandan Airlines) have been brought back to life; others have tried restructuring, with questionable success (Air Seychelles, South African Airways). Efforts to introduce the private sector into SOE operations have also

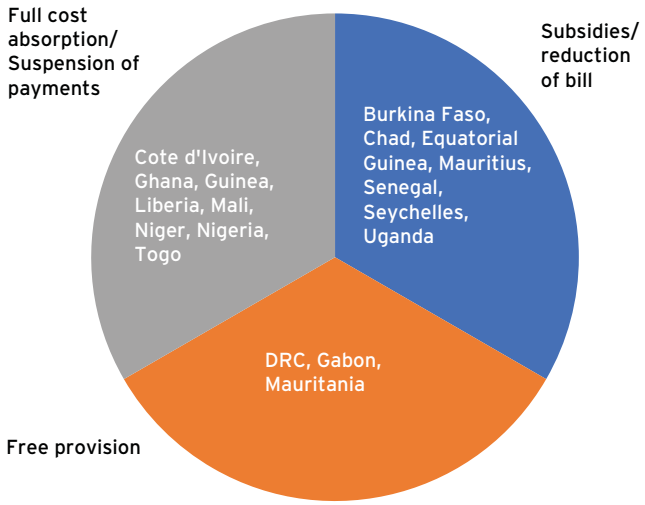
3 Average for the 14 countries for which data are available in the IMF's PSBS Database, Fiscal Transparency Evaluations (FTEs) and Capacity Development (CD) reports. Data exclude central banks and are largely nonfinancial corporations. For these countries, on average, SOEs account for 21% of public sector liabilities and 34% of assets.

extended to concession arrangements for railroads (e.g. in Tanzania and Zambia) and to utility companies (e.g. energy in Mali and electricity distribution in Ghana). As with some of the airline privatisations, many concession arrangements proved to be short-lived.

COVID-19: MANAGING AN UNPRECEDENT CRISIS

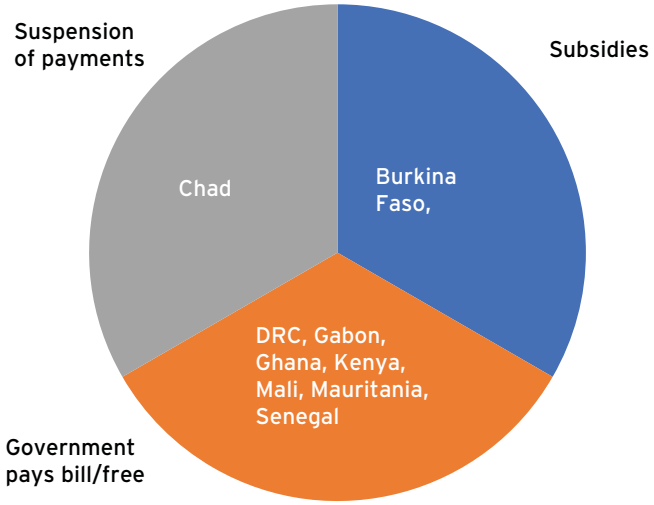
Sub-Saharan African governments have deployed SOEs to help ease the impact of the Covid-19 pandemic on vulnerable firms and households. This is particularly true of national utilities, which can reach households relatively quickly, when social safety nets are underdeveloped. In the power sector, where SOEs have a significant presence, 19 SSA countries have eased electricity payments for consumers (Akrofi and Antwi 2020). The measures – largely consisting of subsidies, reductions in electricity bills, or suspension of bill payments (Figure 2) – were temporary and typically targeted low-income households or individuals and firms affected by the pandemic. However, a few provided free electricity to all households (DRC) or more generally (Mauritania). A similar scenario has played out in the water sector, again dominated by state-owned enterprises, where at least ten sub-Saharan Africa governments have subsidised or suspended payments, or paid water bills on behalf of the vulnerable (Figure 3).

FIGURE 2 REDUCTION IN COST OF ELECTRICITY



Source: Akrofi and Antwi (2020).

FIGURE 3 REDUCTION IN THE COST OF WATER



Source: Cooper (2020)

These actions were accompanied by development banks stepping in to ease the impact of the pandemic on firms and households. The Development Bank of Southern Africa has supported the South African government with the provision of potable water, bathing facilities, and mobile electricity infrastructure to hard hit municipalities. Other development banks are preparing to provide financing during the recovery phase. For example, with the support of the World Bank, Ghana plans to launch the Development Bank of Ghana in 2021 with a mandate to increase access to finance for viable micro, small, and medium-sized enterprises, many of which have been negatively affected by the pandemic.

Moreover, SOEs and public banks have been important vehicles of external financing in some countries. These operations continued during a period when international issuance by sovereigns in SSA was almost non-existent (between March and late November 2020). As a result, some of the largest external financing operations in SSA since the Covid pandemic have involved SOEs or public banks in Angola, Ghana, and Nigeria.

However, as with private companies, the pandemic is adding to the existing financial stress of some SOEs. For example, the African Airlines Association estimates that the revenues of African airlines, most of which are state-controlled and including those in north Africa, could fall by two-thirds in 2020 from the impact of the Covid-19 pandemic. The International Air Travel Association (IATA) anticipates that several SSA countries

will be hard hit by reduced air traffic,[4] which has prompted governments (Burkina Faso, Cabo Verde, Côte d'Ivoire, Rwanda, Senegal, South Africa) to provide some relief to their airlines.

Covid-related financial pain and relief have extended to other sectors. Early restrictions on travel likely reduced demand for passenger rail services too, which are largely supplied by national rail companies. Lower electricity demand is hurting national electricity companies. For example, Kenya Power, which was already under financial pressure even before the pandemic struck, has been hard hit, with demand dropping while arrears soared. Similarly, Zimbabwe Electricity Transmission and Distribution Company (ZETDC) suffered from a reduced system load of 25% after the country went into lockdown in late March (Akrofi and Antwi 2020). Some countries have allocated money from the budget to help their beleaguered electricity firms, such as the state-held distribution company Empresa de Electricidade de Luanda in Angola.

THE POST-COVID DEVELOPMENT AGENDA

SOEs in network industries should be part of a broader framework that leverages government policy tools and the private sector to put the development agenda back on track in Africa. Prior to the pandemic, the IMF estimated that achieving the Sustainable Development Goals by 2030 required a substantial scale-up of spending. In key areas such as health, education, and priority infrastructure, the average annual additional spending in low-income developing countries reaches 15% of GDP (in SSA it is 19% of GDP) in 2030 (Gaspar et al. 2019, Prady and Sy 2019). The pandemic has added to those costs while setting back the progress achieved towards sustainable development over the past decades. About 80 to 90 million more people are expected to be pushed into extreme poverty in 2020 relative to the pre-COVID19 trend (IMF 2020b), of which about 25-27 million are in SSA. As countries start exiting the pandemic, it is crucial to ensure that growth in all countries returns to a sustainable, green and inclusive path. The sheer size of the challenges will require massive efforts from both the public and private sectors. Given the presence of SOEs in critical economic sectors, their engagement in building infrastructure and providing public goods and services will be necessary to reach the core SDGs in many countries. SOEs also have a critical role to play in mitigating and adapting to climate change in SSA.

4 The hardest hit include Cabo Verde, Ethiopia, Ghana, Kenya, Mauritius, Mozambique, Nigeria, Senegal, and South Africa (see the IATA press release of August 20, "Impact of COVID-19 on African Aviation and Economies is Worsening").

Strengthening SOEs

Ambitious government-driven reform of SOEs in SSA is a necessary condition to regain the upper hand in combatting poverty in a post-Covid world. Better managed and financially sound SOEs would deliver two benefits for SSA governments. First, resources diverted to loss-making SOEs would be freed-up for spending on achieving the SDGs and other government priorities. Second, achieving the SDGs would be more likely, as productive SOEs would boost growth and, in network sectors, support the extension of basic public services to underserved households in a cost-effective manner. Getting the most out of SOEs will demand political will and capacity building to ensure better governance and greater accountability.

Align SOE activities with government policy

A first step for many African governments is to review their SOE portfolios and establish priorities. The starting point is a government assessment of the rationale for each SOE. This tends to be stronger when there are market imperfections or externalities, which is usually the case in network sectors. Governments should also compare reliance on SOEs with other types of government intervention such as regulation with private sector participation, or public-private partnerships. In addition, it will be important that SOEs operating in competitive sectors are not granted special treatment (for example, regulatory advantages or lower borrowing costs) that distorts competition and could lead to lower productivity in the sector and the economy. The size of the challenges, and strained government budgets, makes it critical to attract private investors to infrastructure sectors – Africa lags all other regions in the world on attracting private investment.

Cost-benefit evaluation among policy choices also extends to using SOEs to achieve broader policy goals, like generating jobs, and whether more traditional fiscal policy instruments would be more efficient and less distortionary (for example, targeted transfers to poorer households). Governments should also set and regularly review ownership policies and objectives to ensure they remain relevant and that the reasons for the existence of the SOE remain valid.[5] Regular reviews are critical to weeding out SOEs that are chronic poor performers that undermine innovation and productivity growth, and waste public resources. If the review leads to a decision to sell the SOE, certain preconditions to realise the benefits of sale – such as a solid regulatory framework, independent regulators, strong property rights, and a strong governance framework – should be in place (IMF 2020a). A robust social safety net could ease resistance to the disposition of SOEs that have outlived their useful lives.

5 Ownership policies should include (1) mandates, objectives, and a dividend policy for SOEs; (2) the approach to select professional boards; (3) the functions carried out by the government as owner of the SOE; and (4) how it exercises its ownership rights (Allen and Alves 2016).

More generally, it is important to ensure that SOEs operate consistently with the broader fiscal objectives. In SSA, SOEs are typically not consolidated in fiscal statistics and discussion in government budgets tends to be limited.[6] Incorporating SOE activities into the fiscal accounts and policy strategy would bring important advantages. First, SOEs are more likely to have to compete for the best use of public resources. Outside the fiscal statistics, SOEs may receive funds from the government that could be better and more efficiently spent on priorities, such as health and education. Second, it would allow for a full diagnostic of potential vulnerabilities of the public sector – for example, management of assets and liabilities are hampered if fiscal accounts do not take into consideration SOEs' balance sheets. Third, it would improve the transparency of the financial interactions between the government and SOEs, including costs associated with policy mandates. [7]

Governments also need to establish the proper incentives for SOE boards and managers to run their companies efficiently and soundly. This requires striking the right balance between effective oversight and limiting political interference, which can be particularly challenging given that SOEs are not run solely on a commercial basis. Setting measurable and realistic performance objectives is a critical, but complex task. It involves clearly identifying and costing non-commercial objectives (mandates) and ensuring consistency between them and the financial targets. It may also require compensating SOEs for losses due to the policy mandates' costs through subsidies or capital transfers.[8]

The tensions between government mandates and ensuring a sound financial health of SOEs is particularly problematic in regulated markets, such as public utilities and transportation. Governments usually try to balance many interests, including achieving universal access at affordable prices and normal returns on investments, addressing externalities (e.g. pollution), and containing costs to the budget. In practice this has not been achieved, helping explain the failure to extend universal access to safe water, sanitation, and reliable electricity. Balancing all the objectives requires greater attention to:

- **The right pricing policy.** Preferably, prices should be set to ensure cost recovery. However, this is not always straightforward. Prices may be set below cost where a large segment of the population is poor and social safety nets are not well developed. At a minimum, there should be a transparent process for governments to provide appropriate compensation in a timely manner while demanding cost-efficiency efforts by SOEs. Similarly, it is important to prevent excessively high prices if the

6 Based on the IMF's Fiscal Transparency Evaluations since 2014, around 90% of the countries evaluated did not publish comprehensive information on the public sector.

7 The IMF's Fiscal Transparency Handbook recommends the disclosure of quasi-fiscal activities, including the rationale for undertaking them and the mechanisms used to compensate SOEs.

8 Some countries, especially those with strong governance, have been successful in setting performance contracts to ensure there are appropriate incentives and accountability. However, in many developing economies, performance contracts failed to make a difference (Shirley 1998, Simpson and Nyante 2015). The experiences highlight the importance of good design of these contracts, including setting realistic and monitorable objectives, and supportive institutions.

SOE has monopoly power. Generally, pricing decisions should be transparent and depoliticised, for example by introducing automatic adjustment mechanism for fuel prices or tariffs.

- **Independent regulatory agencies**. Regulatory agencies free from political interference are needed to balance the different interests and enforce the rules. For example, regulators can ensure electricity tariffs are set to balance affordability objectives and the need to cover costs. Regulators can promote a level playing field when both SOEs and private investors are involved, and can encourage reforms, including on governance, to improve efficiency and quality of services.

Enhance SOE governance and transparency

SOEs have struggled enormously with corruption. Cross-country evidence confirms that weak governance is a major driver of poor SOE performance as they are particularly vulnerable to corruption, given their proximity to civil servants and holders of public office. SOEs operating in countries with strong levels of governance are three times more efficient than SOEs operating in countries with weak governance (IMF 2019). Similarly, while on average SOEs have a significant efficiency gap relative to their private peers, the average difference is small in countries with strong governance.

These findings underscore the urgency of governments supporting and enforcing greater SOE transparency to facilitate external scrutiny by the public. Financial information on SOEs remains very uneven and, in many countries, sparse. This is especially the case for national oil companies (NOCs) in Africa (Figure 4) – fewer than a quarter of the companies provide detailed information on their operations and balance sheets, despite controlling large assets of the country. Publishing regular reports with detailed information and analysis of the performance of the SOE sector at the aggregate and company level is an important step towards greater transparency and accountability. Some SSA countries do provide information on SOEs (e.g. Angola, Ghana, South Africa), but even then the information is not always timely, comprehensive, or audited.

Governments should also establish good corporate governance standards for SOEs. The OECD Guidelines on Corporate Governance of SOEs (OECD 2015) is the most well-known benchmark in this area. There has been a growing call for promoting independent and professional boards that can help ensure proper accountability. Transparency International (2017) also issued "10 Anti-Corruption Principles for SOEs", which include aspects such as transparency and reporting, risk assessment, managing relationship with third parties, accessible whistleblowing channels, and continuous improvement of the anti-corruption strategy. The Natural Resources Governance Institute published a "Guide to Extractive Sector State-Owned Enterprise Disclosures" (NRGI 2018) to help SOEs comply with high transparency standards. However, while a growing number of countries have established legal frameworks for SOEs, implementing high corporate governance and transparency standards remains challenging in many developing countries.

FIGURE 4 REPORTING BY NATIONAL OIL COMPANIES, BY REGION (SHARE OF FIRMS THAT REPORT, 2015)

Indicator	ALL	Asian-Pacific	Eurasia	Latin America	Middle East and North Africa	Sub-Saharan Africa	Western Europe
Total oil and gas production	75	69	83	92	59	76	100
Revenues from oil and gas sales	63	69	83	85	29	65	100
Total NOC revenues	66	88	83	85	35	53	100
Total transfers to Government Treasury	65	88	83	77	24	65	100
Capital Expenditures	48	63	83	69	24	24	100
Operational Expenditures	56	81	83	85	24	29	100
Total Assets	59	81	83	85	35	29	100
Employees	45	50	67	46	29	41	100

Source: Natural Resources Governance Institute (2019)

Improve oversight and monitoring of fiscal risks

Governments need to invest more in developing institutional capacity to effectively monitor SOEs. Many government agencies have difficulty in monitoring SOEs, especially those that are large and have complex businesses, reflecting in many cases the lack of capacity and resources and political interference. There is evidence that a strong oversight and control agency can yield better performance from SOEs (Musacchio and Pineda Ayerbe 2019) than the fragmented approach, with several agencies and ministers sharing responsibility, which prevails in many SSA countries. A centralised model may help ensure consistency between the ownership (for example, the strategic direction of the firm) and financial oversight functions. Whatever the model, it will be important that one government unit (preferably at the ministry of finance) is responsible for the financial oversight of SOEs, as it would make oversight activities more coherent, while pooling experts from different areas. If there are capacity constraints, monitoring could prioritise a subset of SOEs in a first stage –for example, those that run complex business models or represent large fiscal risks. In addition, for the largest SOEs, another option is to bring in private shareholders that help promote greater focus on efficiency and another layer of external oversight.

Ensuring an appropriate assessment of SOEs performance and risks is also vital given the potentially sizable consequences to the government budget and the economy. In general, the analysis of the performance and fiscal risks from individual SOEs is underdeveloped. Baum et al. (2020) have recently introduced a new framework and tool to help countries assess risks from SOEs. It aggregates information from more than 20,000 SOEs across the world. The tool allows for (1) SOE's financial indicators to be benchmarked to assess the relative performance of the company to its peers and identify main vulnerabilities;[9] and (2) a forward-looking analysis of the impact of different scenarios on the SOE and

9 The benchmarks can be useful to help set goals and expectation regarding the financial performance of the SOE.

public finances. It allows for the estimation of SOE contributions to the budget (e.g. royalties, dividends) and the size of potential needs for government support if risks materialise.

SOEs can help promote a greener economy

The actions of state-owned enterprises could also have a large impact towards achieving a greener economy. SOEs across the globe emit over six gigatons of CO_2 each year according to conservative estimates (Benoit 2019), due to their significant presence in the energy sector and energy-intensive sectors (e.g. transportation). For example, the Nigerian National Petroleum Corporation is the 25th-largest emitter globally (Benoit and Clark 2020). Depending on the country, governments can use SOEs to drive climate action across energy, industry, and urban transit sectors.[10] This will require establishing the right incentives for SOEs and resolving tensions between different objectives.

SOEs in the power sector account for a substantial quantity of greenhouse gases – more than their private peers (OECD 2018). They can play a leading role in setting standards and adopting technologies that are greener. For example, some power SOEs have taken a leading role in deploying electric vehicle charging infrastructure and mass transit electrification.

Greening national oil companies (NOCs) will require a comprehensive strategy. NOCs are responsible for over half of oil production and reserves. They also provide large revenues to budgets and many are involved in quasi-fiscal activities (for example, providing fuel at below-market prices). How to prepare NOCs for the low-carbon transition will require a country-level strategy that will take into account all the aspects (environment, fiscal, and social).[11] Their actions will also impact third countries where they conduct exploration, development, and sales activities.

Actions will also be needed for SOEs that operate in other energy sectors, like coal, and in energy-intensive industries, like steel and transportation (e.g. national airlines, urban transportation). Governments can play a role by including green priorities among the policy mandates of the firms – while also taking into account the potential adverse financial impact.

PUTTING IT ALL TOGETHER

The reforms proposed are difficult and will require strong political will, but the stakes are high for many in Africa. As history shows, SOEs in many developing countries have disappointed in their role as engines of economic development (Krueger 1990). However, the evidence also shows that reforms can work. For example, Baum et al. (2019) show

10 Public banks can also play a key role by funding low-carbon projects.
11 Many European and US oil and gas companies have already announced ambitious plans to cut emissions from their operations.

that reforms on governance and pricing policies can have significant positive impact. This will require ensuring that both the operations of the SOEs and their relations with government are subject to a high degree of transparency and accountability. Well-run and financially sound SOEs will help promote a greener and more inclusive economic recovery, including achieving the provision of safe water and reliable supply of electricity to all. Given the massive challenges, the efforts to get the most out of SOEs should be accompanied with efforts to leverage private sector expertise and financial resources. Absent this, achieving the SDGs may prove elusive.

REFERENCES

African Airlines Association (2020), "Covid-19 Impact Assessment", 13 July.

Akrofi, M and S Antwi (2020), "COVID-19 energy sector responses in Africa: A review of preliminary government interventions", *Energy Research & Social Science* 68.

Allen, R and M Alves (2016), "How to Improve the Financial Oversight of Public Corporations," How-to Note, IMF Fiscal Affairs Department.

Allen, R and S Vani (2013), "Financial Management and Oversight of State-Owned Enterprises", in R Allen, R Hemming, and B H Potter (eds), *The International Handbook of Public Financial Management*, Palgrave Macmillan.

Benoit, P (2019), *Engaging State-Owned Enterprises in Climate Action*, Center of Global Energy Policy, Columbia University.

Baum, A, C Hackney, P Medas, and M Sy (2019), "Governance and SOEs: How Costly Is Corruption?", IMF Working Paper No 19–253.

Baum, A, P Medas, A Soler and M Sy (2020), "Managing Fiscal risks from State-Owned Enterprises", IMF Working Paper No 20-213.

Cooper, R (2020), "Water for the urban poor and Covid-19", K4D

Gaspar, V, D Amaglobeli, M Garcia-Escribano, D Prady, and M Soto (2019), "Fiscal Policy and Development: Human, Social, and Physical Investment for the SDGs", IMF Staff Discussion Note SDN/19/03

IMF (2015), "Is the Glass Half Empty or Half Full? Issues in Managing Water Challenges and Policy Instruments", IMF Staff Discussion Note 15/11.

IMF (2019) "Curbing Corruption", *Fiscal Monitor*, April 2019, International Monetary Fund, Washington D.C.

IMF (2020a), "Policies to Support People During the COVID-19 Pandemic", *Fiscal Monitor*, April 2020.

IMF (2020b), "State-Owned Enterprises: The Other Government", *Fiscal Monitor*, May 2020.

Krueger, A O (1990), "Government Failures in Development", *Journal of Economic Perspectives* 4(3): 151–174.

NRGI – Natural Resources Governance Institute (2018), "Guide to Extractive Sector State-Owned Enterprise Disclosures".

OECD (2015), *OECD Guidelines on Corporate Governance of State-Owned Enterprises*, 2015 Edition.

OECD (2018), *Ownership and Governance of State-Owned Enterprises: A Compendium of National Practices.*

Prady, D and M Sy (2019), '' The Spending Challenge for Reaching the SDGs in Sub-Saharan Africa: Lessons Learned from Benin and Rwanda", IMF Working Paper No 19–270.

Puliti, R and D Ogunbiyi (2020), "Energy access takes center stage in fighting COVID-19 (Coronavirus) and powering recovery in Africa", World Bank, 22 April.

Shirley, M (1998), "Why Performance Contracts for State-Owned Enterprises Haven't Worked", *Public Policy for the Private Sector* 150, August.

Simpson, S N Y and H N Nyante (2015), "Evaluating Performance Contracts as a Tool for Evaluating State-Owned Enterprises in Two Developing Countries: A Look at the Performance Dimensions", *Public Policy and Administration Research* 5(9): 27–35.

Transparency International (2017), *10 anti-corruption principles for state-owned enterprises.*

Trimble, C, M Kojima, A I Perez and F Mohammadzadeh (2016), ''Financial Viability of Electricity Sectors in Sub-Saharan Africa: Quasi-Fiscal Deficits and Hidden Costs", World Bank Policy Research Working Paper No. 7788.

United Nations (2019), UN World Water Development Report 2019: Leaving no one behind.

World Bank (2004), *Reforming Infrastructure: Privatization, Regulation, and Competition*.

World Bank (2017), *Who Sponsors Infrastructure Projects? Disentangling Public and Private Contributions.*

World Bank (2019), *Rethinking Power Sector Reform in the Developing World.*

WHO and UNICEF – World Health Organization and United Nations Children's Fund (2017), "Progress on Drinking Water, Sanitation and Hygiene: 2017 Updated and SDG Baselines".

ABOUT THE AUTHORS

Vitor Gaspar is Director of the Fiscal Affairs Department of the International Monetary Fund; before that, he was minister of state and finance of Portugal from 2011-13, and has held various positions at the European Commission, European Central Bank, and the Central Bank of Portugal.

Paulo Medas is Deputy Division chief in the Fiscal Policy and Surveillance Division at the International Monetary Fund; his research interests include state-owned enterprises, fiscal and debt crises, fiscal rules, and governance.

John Ralyea is a Senior Economist in the Fiscal Policy and Surveillance Division at the International Monetary Fund.

CHAPTER 6

The state of tourism in Africa during Covid-19 and beyond: Evidence from big data[1]

Rabah Arezki,[a,b,c] Alice Froidevaux,[d] Thanh-Long Huynh,[d] Ha Minh Nguyen[b] and Nicolas Salez[d]

[a]African Development Bank; [b]World Bank; [c]Harvard Kennedy School;
[d]QuantCube Technology

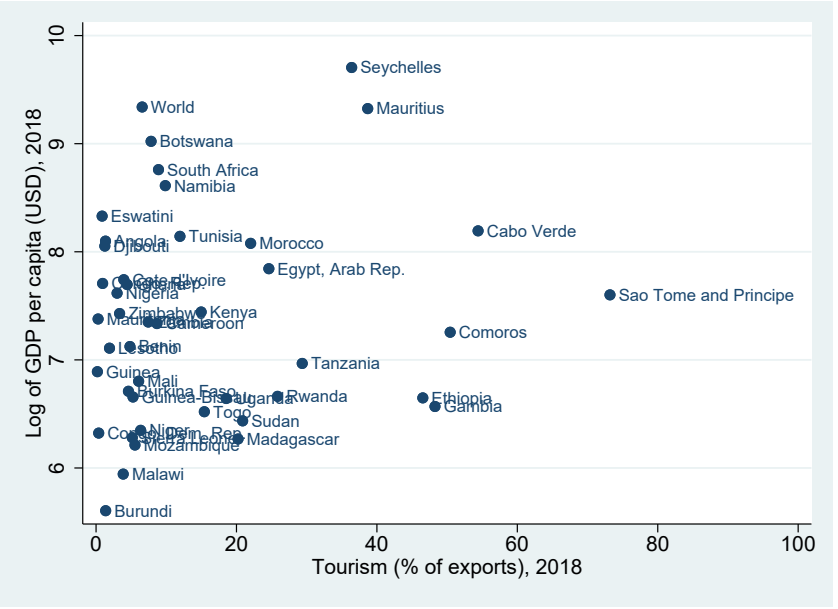
INTRODUCTION

For many African countries, tourism provides a substantial share of jobs and foreign receipts. As of 2018, tourism receipts represented about 40% of exports over GDP for the Seychelles and Mauritius and were as high as 70% for Sao Tome and Principe (see Figure 1). For the continent as a whole, tourism contributed US$168.5 billion, accounting for 7% of Africa's GDP in 2019 (World Travel and Tourism Council 2020). The Covid-19 pandemic has brought tourism to a sudden standstill. In this chapter we use big data analysis to explore the effect of the pandemic on tourism in Africa and discuss how to shape recovery for the sector.

Tourism is both a source of economic development and a source of vulnerability. A large body of empirical evidence has shown a positive relationship between the extent of a country's specialisation in tourism and economic growth. Arezki et al. (2012) find that an increase of one standard deviation in the share of tourism in exports leads to about 0.5 percentage points of additional annual growth, everything else being constant. But developing economies that depend on tourism are also exposed to the vagaries of growth dynamics in advanced economies (Chen and Ioannides 2020). Because tourism is highly demand elastic, during recessions or global pandemics such as the world is experiencing today, tourism expenditures decline significantly.

1 We thank Simeon Djankov for helpful comments. The findings, interpretations, and conclusions expressed in this paper do not necessarily reflect the views of the African Development Bank, the World Bank, their Executive Directors or the governments they represent. The African Development Bank and the World Bank do not guarantee the accuracy of the data included in this work. All remaining errors are ours.

FIGURE 1 TOURISM RECEIPTS (% OF EXPORTS) AND GDP PER CAPITA



Note: Tourism data are as of 2018, except for Kenya, Mali, Benin, Cote d'Ivoire, Niger, Togo, and Zimbabwe (data as of 2017) and Republic of Congo (data as of 2016).

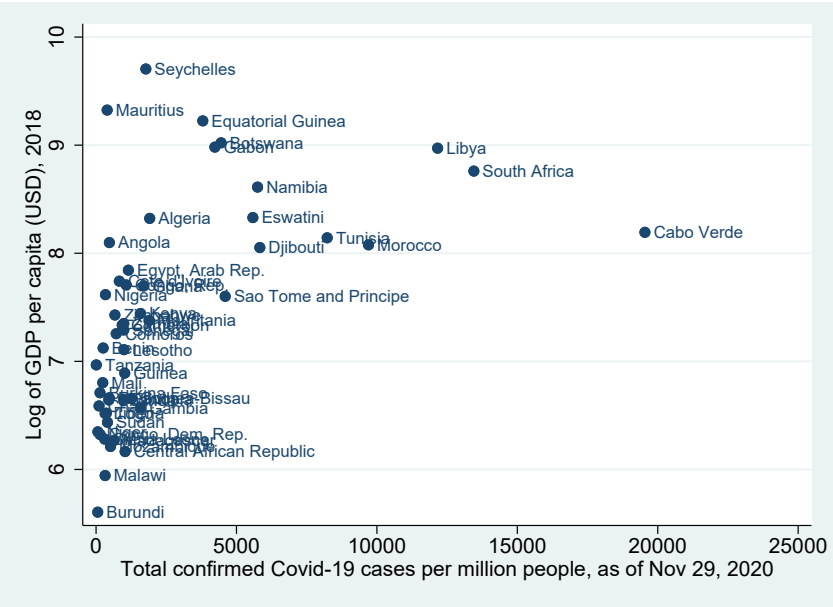
Source: World Bank, World Development Indicators.

Although Africa has had fewer recorded infections than other world regions – the 54,000 deaths in Africa are about the same as in France alone – the continent stands to lose the most from an economic standpoint. For example, in 2020 Africa will experience its first recession in two decades. The African Development Bank projects that growth will decline by 3.4%. At the root of the continent's outsized economic devastation from the Covid-19 pandemic is Africa's heavy reliance on external flows such as those coming tourism.

Although Africa is less globally connected than other regions in the world, the continent has several major transport hubs: Johannesburg and Cape Town (in South Africa), Cairo (Egypt), Addis Ababa (Ethiopia), Casablanca (Morocco), and Lagos (Nigeria). The countries with transport hubs are also among the countries with most Covid-19 cases on the continent. In terms of Covid-19 cases per capita, Cape Verde, South Africa, and Libya stand out as the most affected countries in Africa (see Figure 2).[2] Globally, as of 29 November 2020 there were 8,194 confirmed cases per million people.

2 Note that for the whole world, the figure is about 8,194 confirmed cases per million people (with Covid-19 data as of 29 November 2020 and based on the 2019 world population of 7.7 billion people).

FIGURE 2 TOTAL CONFIRMED COVID-19 CASES PER MILLION PEOPLE AND GDP PER CAPITA



Source: World Development Indicators (population in year 2019) and Johns Hopkins University (confirmed Covid-19 cases as of November 29, 2020)

To explore the effect of Covid-19 on tourism in Africa in real time, we have worked around traditional tourism data, which are collected by tourism authorities and are available on an annual basis, sometimes with big delays for countries with weak or non-credible statistical systems. We instead employed alternatives to official data – using search queries, flight traffic, hotel prices and online reviews. We constructed indicators covering many countries around the world calculated in a systematic way using QuantCube's technology. The Tourism Index is a two-month to more than 12-month leading index. The approach allows for timely analysis of the effect of the pandemic on the tourism sector by 'nowcasting' macroeconomic aggregates.

Tourism is not just another sector of economic activity in Africa, it is also an economic gateway to the continent. Travellers don't always travel only for leisure; many often also explore whether they could come back to invest and trade with the continent. There is a risk that if the pandemic is not addressed properly, the ripple effect on trade and investment will far exceed the size of the tourism sector itself. Restarting tourism is thus a priority for public policy. Investing in travel safety and health standards, including vaccines, will not only help societal welfare, but will also reassure the world that Africa is open for business.

The remainder of the chapter is organised as follows. The next section presents the data. The third section explores the impact of Covid-19 on tourism. The fourth section looks at the SARS epidemic in Asia in 2003 at policy responses to shape the African recovery.

BIG DATA

The big data approach provides timely information about tourism in the African continent. To track the real-time effects of the Covid-19 pandemic on African tourism, we introduce two indices: an air traffic index and a tourism index. The air traffic index provides real-time global air traffic monitoring based on flight data at major airports around the world, including those in Africa. The index tracks the evolution of air traffic numbers in real time by analysing flight data from airports all over the world and taking into account the characteristics of the airplanes. To avoid the volatility inherent in the daily data, we compute a rolling average over seven and 28 days of the daily traffic. For countries that heavily depend on foreign tourist arrivals, this index is used as an input to the tourism index.

The tourism index tracks the hotel occupancy rate in many African, Middle Eastern and Asian cities and countries. To create this index, we first identified the drivers of tourism in each city and country to obtain the most appropriate data for the main countries of origin of tourists.

Because each city or country has its own touristic market, QuantCube Technology has developed a methodology that can be adapted to each location. All travel planning can be divided into three steps – research queries about a chosen location, hotel room booking. and transportation booking – so we collect and analyse appropriate real time data for each of them.

To create the tourism index, we rely on touristic-related search queries from hotel reviews from online travel agencies, flight arrivals from air traffic data, and search engines such as Google Trend. These alternative data are available in real time and permit daily updates of the tourism index.

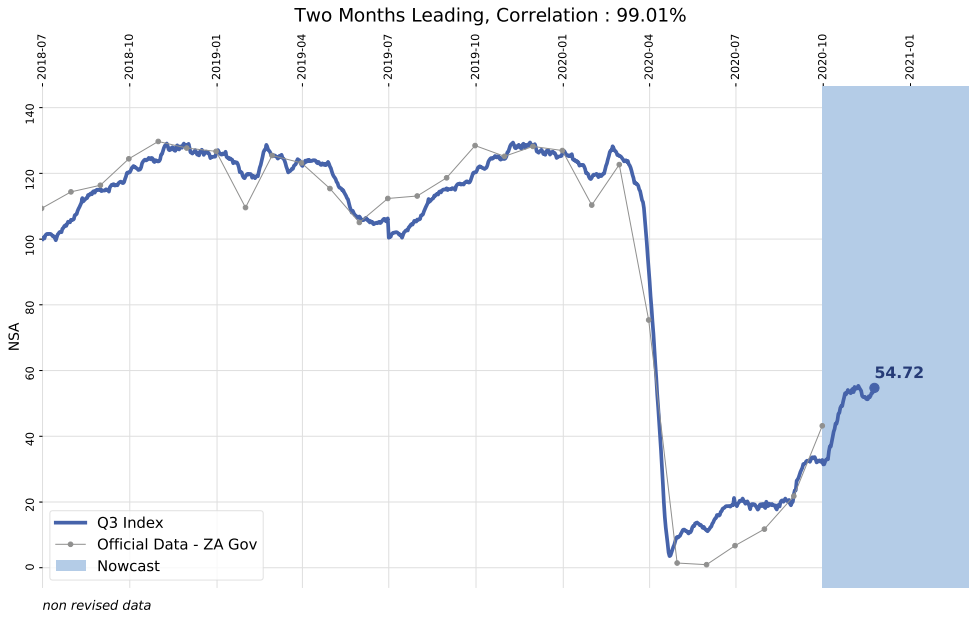
First, hotel reviews from online travel agencies allow us to capture the number of visitors to a city. Air traffic data permit us to estimate the number of tourist arrivals in the closest city airport. Those data reflect the trend of hotel reservations and arrivals of tourists in the cities and countries of interest. This information is either general (depending on the airport network per country) or specific to the city with the hotel reservations. Attention is paid to the tourist market (categories of hotels, number of stars) of the city to choose the best combination of hotels from which to extract data.

Then, internet search queries allow us to build a proxy of tourist trips per country, because tourist search queries reflect not only travel preferences but also predict future travel destinations. The queries are either general or specific to a city – about a city's monuments, tourist attractions or restaurants, for example. For the Maldives, for instance, we have identified diving as a popular activity, so we consider "diving" as a keyword for the island country. But diving would be an inappropriate keyword for a landlocked and mountainous country such as Nepal, where trekking is most popular.

Finally, by aggregating air traffic, hotel data and search queries, we can track in real time the tourism occupancy rate at the city level. The country-level indicator is created by summing the cities occupancy rates weighted by the share of national tourism a city represents.

We calculate the year-over-year variation of this index and validate it using official tourism data. For example, Figure 3 presents the South Africa tourism index (blue curve) and official occupancy rate data provided by Statistics South Africa, the official national statistical institute (black curve). We observe a 99% correlation between our real-time tourism index and the official occupancy rate. The South Africa QuantCube tourism index is a two-month leading index because official occupancy rates are published two months after the end of the reference month.

FIGURE 3 TOURISM INDEX FOR SOUTH AFRICA



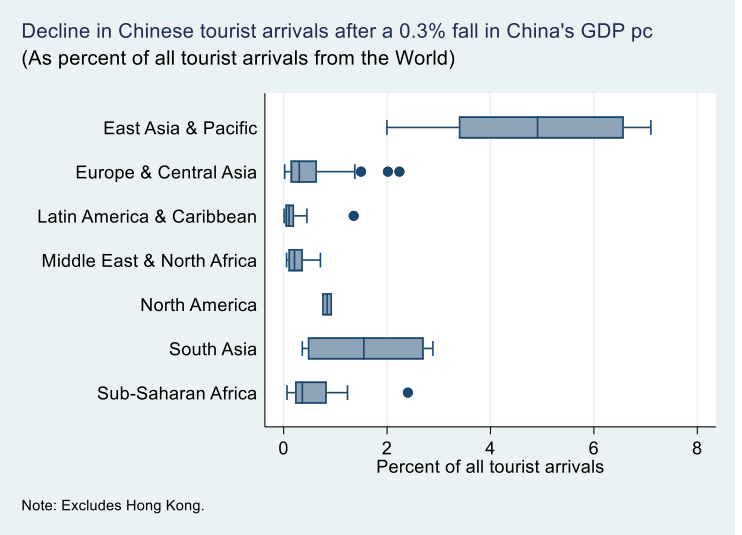
Source: QuantCube computations.

EFFECTS OF THE PANDEMIC ON TOURISM IN AFRICA

The Covid-19 pandemic has retarded tourism in Africa. The decline in tourism is a demand effect, as potential visitors cut tourism expenditures. Figure 4 shows a simulation of a 0.3% decline in China's per capita GDP on the global tourism industry, assuming GDP did not change in other regions. The simulation, conducted in March 2020, resulted in a 0.3% decline in travel and tourism jobs in sub-Saharan Africa. The simulated Chinese growth reduction hit countries in East Asia and the Pacific even more severely. Travel and tourism jobs in that region, which hosts more Chinese tourists than does Africa,

were projected to decline more than 3%. Note that this is partial equilibrium analysis of a potential GDP decline in China, assuming other regions were unaffected by the virus – which, of course, did not occur.

FIGURE 4 ESTIMATED IMPACT OF A DECLINE IN CHINA'S PER CAPITA GDP ON TRAVEL AND TOURISM EMPLOYMENT IN AFRICA AND THE REST OF THE WORLD



Source: Lopez-Cordova (2020a).

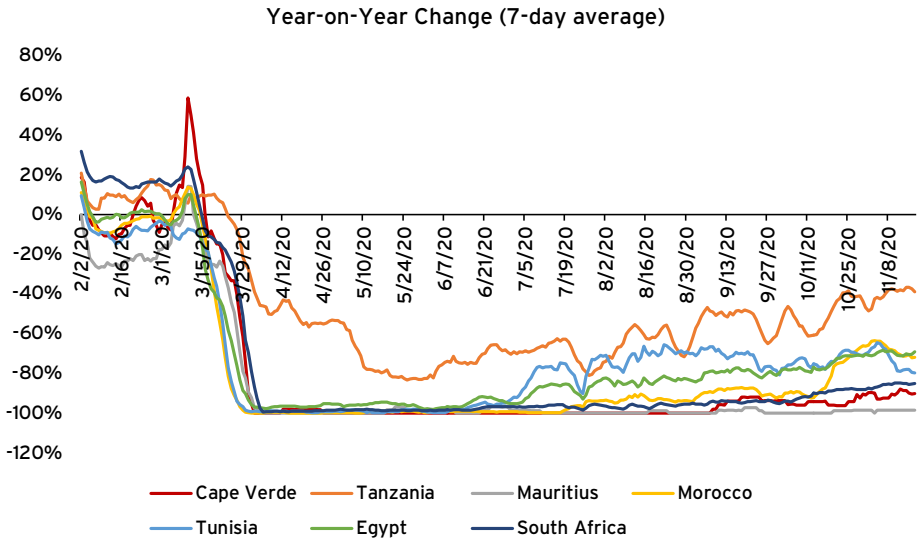
But the fall in tourists to Africa is much more the result of health concerns than economic issues. Social distancing measures imposed by many countries also severely restrict travel options to Africa. Potential tourists do not want to travel to Africa – or anywhere else – because they fear contracting Covid-19 en route or at their destination. That is not an unreasonable fear; ample evidence suggests that Covid-19 transmissions took place during flights (Nguyen et al. 2020).

When relying on real time analysis, QuantCube's high-frequency air traffic and tourism indices for selected African countries show devastating effects. Air traffic for all countries in our sample but Tanzania collapsed entirely in April, which corresponds to a spike in cases and changes in travel advisory (see Figure 5). It has recovered slightly but remains depressed. Similarly, the Tourism Index collapsed in early April, although there are signs of recovery in recent months – especially in Morocco and Tunisia (see Figure 6). Similar trends emerge for major tourist cities in the rest of Africa (see Figure 7).

Many African countries tried to attract tourism during the summer. Tunisia reopened its land, sea and air borders on 27 June, allowing tourists to enter the country based on a color-coded risk assessment system. Egypt resumed tourism on 1 July, imposing strict hygiene measures and controls on the number of tourist arrivals. Kenya reopened its borders to international travel on 1 August; Rwanda, Tanzania, and Seychelles have

reopened their borders as well. The relaxation of travel restrictions in Europe over the summer led to a temporary increase of tourist arrivals. Renewed lockdowns in major European countries in the fourth quarter likely will result in reduced visits to Africa.

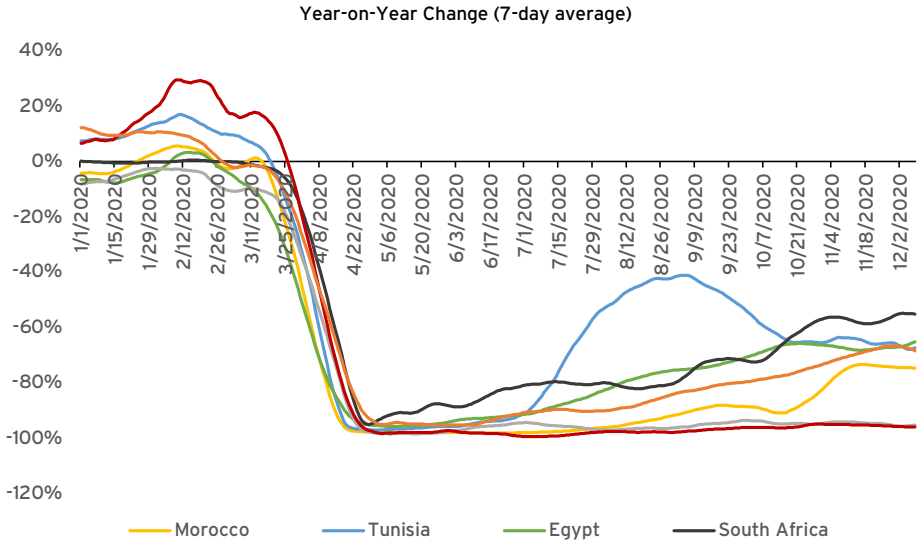
FIGURE 5 AIR TRAFFIC INDEX FOR SELECTED AFRICAN COUNTRIES



Note: QuantCube's Air Traffic Indicator provides real-time global air traffic monitoring based on flight data at major airports around the world.

Source: Quantcube Technology

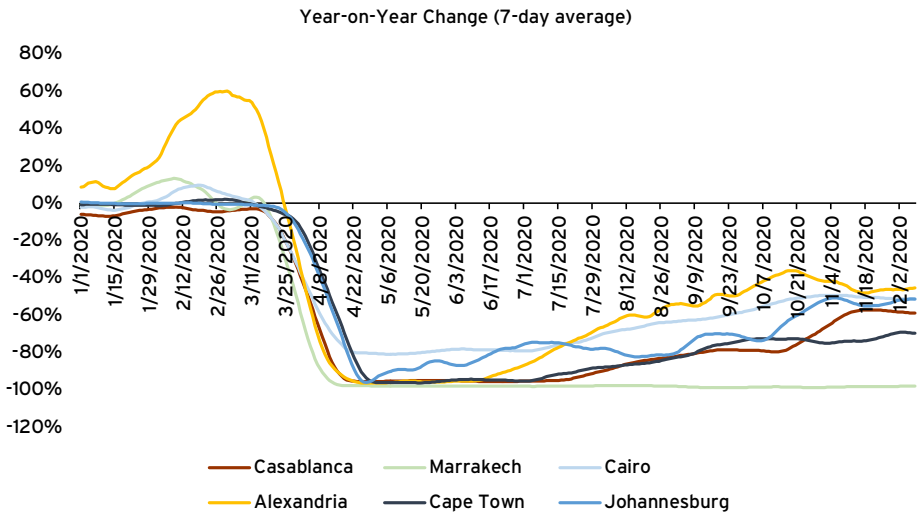
FIGURE 6 TOURISM INDEX FOR SELECTED AFRICAN COUNTRIES



Note: The QuantCube's Tourism Index tracks the evolution of hotel occupancy rates in real-time, by analysing and aggregating travellers' reviews, online travel agency search queries and air traffic data.

Source: Quantcube Technology.

FIGURE 7 TOURISM INDEX FOR SELECTED AFRICAN CITIES



Note: The QuantCube's Tourism Index tracks the evolution of hotel occupancy rates in real-time, by analyzing and aggregating travelers' reviews, Online Travel Agencies search queries and air traffic data.

Source: Quantcube Technology.

SHAPING THE RECOVERY

The full recovery of African tourism will depend on the control and elimination of the Covid-19 virus, especially in the major tourism markets of Africa – namely, Europe and the Gulf Cooperation Council (GCC).[3] Europe, and to a lesser extent the GCC, are still facing high levels of Covid-19 infections (Djankov and Panizza 2020). Until the pandemic is brought under control, most likely through widespread vaccinations, international tourist arrivals are unlikely to recover in Africa. A set of complementary policy responses are in order to shape the recovery.

The Severe Acute Respiratory Syndrome outbreak in 2003

In the outbreak of the severe acute respiratory syndrome (SARS) in 2002-03 in Asia, tourism – especially in hardest-hit Hong Kong – was severely disrupted. SARS, which is caused by a coronavirus related to the one that causes Covid-19, appeared near Guangzhou, China in November 2002 and spread to other countries (Siu and Wong 2004).

Hong Kong was unprepared when SARS was carried to the city by a medical doctor from Guangzhou and hundreds were infected by March 2003. Hong Kong's government then took drastic actions, similar to those countries have taken to deal with Covid-19. It issued

3 For example, for Egypt, air traffic shows that major flight origins (including transits) are Italy, UAE, Saudi Arabia, UK, Belgium, Germany, Jordan. For South Africa, major flight origins are UAE, Kenya, Zambia, Ethiopia, Namibia, Zimbabwe and Qatar.

a quarantine order to prevent further spread, developed a quick diagnostic test for SARS to trace the source of infection, and initiated compulsory surveillance of those who came in contact with infected individuals, closed schools and universities and strengthened collaboration and communication with Mainland China and the WHO (Hung 2013). These responses quickly brought results. The epidemic peaked in April and was under control by June 2003, but not before tourism was severely damaged (Siu and Wong 2004).

But the rebound of travel and tourism to pre-SARS level was rapid after WHO lifted travel advisories. By July 2003, outbound and inbound airport passenger traffic was about 70% of the pre-SARS level. The recovery was aided by a government promotion to attract tourists that included free airline tickets, hotel offers and restaurant discounts.

Policy response

Those hoping that African tourism can revive as broadly and as quickly as Hong Kong tourism did in 2003 are likely to be disappointed. Unlike the 2003 SARS outbreak, which was confined to a defined population (an epidemic), Covid-19 is a global outbreak (a pandemic). As a result, reviving tourism in Africa will be more difficult than it was in Hong Kong. In 2003, the tourism industry in Hong Kong recovered as soon as the virus was brought under control and unaffected parts of the world felt comfortable resuming visits. Today, recovery of the tourism industry in Africa will likely depend on how well the pandemic is controlled in countries where most tourists reside. Moreover, the global pandemic could result in a consolidation of the global airline industry (Assis 2020) as weaker and smaller airlines either go out of business or are absorbed by stronger airlines and the surviving carriers cut routes that serve many small and less well-known African tourist destinations.

In addition, although surveys show that the intent to travel remains strong, they also point to an increasing demand for quality and cleanliness (Oliver Wyman 2020). Most travellers have new health-related concerns and elevated cleanliness of airlines and hotels alongside price when deciding on destinations, hotel choices and airlines.

A survey by Xenophon Analytics also found that social distancing, face masks for crews and passengers, hand sanitizer, good aircraft disinfection procedures, and touchless technology were crucial to airlines regaining the confidence of frequent flyers (Xenophon Analytics 2020).

To bring back tourism, governments in Africa must undertake policies to pave the way for tourism recovery and more importantly, a new tourism model:

- *Control the pandemic within the continent*. Controlling the pandemic is necessary for recovery of tourism and, more generally, economies in Africa – and globally. Although Covid-19 infections in Africa represent a small share of global cases, they are steadily increasing. The epidemiological effort to control the spread of Covid-19 should include social distancing rules, mandatory mask-wearing, testing,

and contact tracing – steps many countries have already taken and similar to those Hong Kong used to limit the spread of SARS in 2003. Countries should also invest in infrastructure to scale up vaccinations when vaccines are available more widely.

- *Encourage domestic tourism with appropriate social distancing rules.* An increase in domestic tourism could partially offset the drop in foreign visitors and provide the tourism industry critically needed cash inflows. This is an attractive option in Africa because of the lower rate of Covid-19 infections. Other countries offer some lessons. Some governments are encouraging local tourism spending by introducing holiday subsidy programmes. South Korea, for example, provides workers with bonuses equivalent to 25% of the cost of the holiday (Djankov 2020). Nevertheless, this must be done with appropriate social distancing rules.

- *Assistance to the tourism industry.* In the short run, tourism industries need government help to prevent bankruptcies, which would cause job losses, hurt local communities and so damage the industry's human capital such that recovery would be hindered. Assistance could take the form of grants or low-rate loans from governments or advance bookings and payments from international partners.

- Investing in and rethinking tourism. The crisis presents an opportunity to rethink the way tourism works, especially in face of the rising demand for quality and cleanliness and potential airline route cuts. Among the possible changes are:

    - *Promotion of clean, green and responsible tourism.*[4] The current tourism hiatus would be a good time to train tourism workers, many of them informal, in this new sustainable tourism approach. Using innovative finance tools by taking advantage of the growing appetite of international investors will help both preserve the environment and restart employment in local communities (Meddeb 2020).
    - *Innovation and digital transformation.* Difficulties that beset bilateral tourism – geographic distance between two countries, language differences, and border-contiguity – have been reduced as potential tourists and businesses in host countries use the internet (Lopez-Cordova, 2020b). Assistance from governments to help firms make investment in digitalisation and retrain workers could help the tourism industry, especially in smaller and less well-known destinations, reach broader markets and more potential tourists.

4 UNWTO (2012) defines green tourism as activities that can be maintained, or sustained, indefinitely in their social, economic, cultural and environmental contexts.

REFERENCES

Arezki, R, R Cherif, and J Piotrowski, (2012) "Tourism, UNESCO World Heritage List, and Economic Growth", in G Licciardi and R Amirtahmasebi (eds), *The Economics of Uniqueness: Investing in Historic City Cores and Cultural Heritage Assets for Sustainable Development*, World Bank.

Assis, C (2020), "After an unprecedented hard landing, the airline industry is facing a long path to a new takeoff", *Market Watch*, 31 August.

Chen, Y and Y M Ioannides (2020), "International Tourism and Short-Run Growth", working paper, Tufts University.

Djankov, S (2020), "Reviving tourism in the COVID era: bungs, tax cuts and no more tour buses", LSE Blog, 13 October.

Djankov, S, and U Panizza (2020), *COVID-19 in Developing Economies*, CEPR Press.

Hung, L S (2003), "The SARS epidemic in Hong Kong: what lessons have we learned?", *Journal of the Royal Society of Medicine* 96(8): 374-8.

Lopez-Cordova, E (2020a), "A Slowdown of China's Economy and its Impact on the Demand for Tourism Services", Brief.

Lopez-Cordova, E (2020b), "Digital Platforms and the Demand for International Tourism Services", World Bank Policy Research Working Paper No. 9147.

Meddeb, R (2020), "How can island states reimagine tourism for green recovery?", OECD Development Matters.

Nguyen, K, P Thai, H Quach, N Thi, P Dinh, T Duong et al. (2020), "Transmission of SARS-CoV 2 During Long-Haul Flight", *Emerging Infectious Diseases* 26(11): 2617-2624.

Oliver Wyman (2020), *Glimpses of Recovery*, Edition 1.

Siu, A and Y C R Wong (2004), "Economic Impact of SARS: The Case of Hong Kong", *Asian Economic Papers* 3(1).

UNWTO (2012), *Tourism in the Green Economy: Background Report*, World Tourism Organization.

World Travel and Tourism Council (2020), "Travel & Tourism: Global Economic Impact & Trends 2020", June.

Xenophon Analytics (2020), "Frequent Flyer Survey Results", July.

ABOUT THE AUTHORS

Rabah Arezki is the Chief Economist and Vice President for Economic Governance and Knowledge Management at the African Development Bank and a senior fellow at Harvard University's John F. Kennedy School of Government.

Alice Froidevaux is Lead Data Scientist at QuantCube Technology.

Nicolas Salez is a Natural Language Processing Expert at QuantCube Technology.

Ha Minh Nguyen is a Senior Economist in the Office of the Chief Economist for the Middle East and North Africa Region at the World Bank.

Thanh-Long Huynh is CEO at QuantCube Technology.

CHAPTER 7

The evolving socioeconomic impacts of Covid-19 in four African countries

Ann Furbush,[a] Anna Josephson,[a] Talip Kilic[b] and Jeffrey D. Michler[a]
[a]University of Arizona; [b]World Bank

INTRODUCTION

The socioeconomic impacts of the Covid-19 pandemic are not yet fully understood as the disease continues to affect individuals and households around the world. Governments have worked to attenuate these socioeconomic impacts by limiting the spread of the virus and mitigating the negative health outcomes of the disease through various policy measures. These policies include limiting travel, imposing quarantines and lockdowns, and closing businesses and schools. The effects of the pandemic have been felt worldwide, though little evidence yet exists on the ongoing impacts for individuals and households in Africa (one exception is the chapters in Djankov and Panizza 2020). We rely on direct measurements of socioeconomic indicators to present evidence on the evolving effects of the pandemic on households, adults, and children living in four African countries (Ethiopia, Malawi, Nigeria, and Uganda), as well as the actions that households are taking to mitigate these impacts.

DATA AND METHODS

To examine the evolving effects of the pandemic, we use longitudinal data from high-frequency national phone surveys in Ethiopia, Malawi, Nigeria, and Uganda. In each country, these phone surveys aim to conduct monthly phone interviews, for a period of 12 months. Supported by the World Bank Living Standards Measurement Study (LSMS), the implementing agencies for the phone surveys in Ethiopia, Malawi, Nigeria, and Uganda are, respectively, Laterite Ethiopia, the Malawi National Statistical Office, the Nigeria Bureau of Statistics, and the Uganda Bureau of Statistics. The anonymised, unit-record phone survey data – as well as basic information documents, interviewer manuals, and questionnaires – associated with each monthly survey round are made publicly available through the World Bank Microdata Library, under the High-Frequency Phone Survey collection (World Bank 2020a, 2020b, 2020c, 2020d).

The sample for these surveys is drawn from households that had been interviewed during the latest round of the national longitudinal household survey implemented by the respective national statistical office, with assistance from the World Bank LSMS-Integrated Surveys on Agriculture (LSMS-ISA) initiative. The pre-Covid-19 LSMS-ISA-supported surveys were designed to be representative at the national, regional, and urban/rural levels. These surveys include the Ethiopia Socio-economic Survey (ESS) 2018/19, the Malawi Integrated Household Panel Survey (IHPS) 2019, the Nigeria General Household Survey (GHS) - Panel 2018/19, and the Uganda National Panel Survey (UNPS) 2019/20. Specific details on each survey are available through the World Bank Microdata Library.

We examine the effects of the pandemic on, and coping strategies employed by, 10,865 households across the four countries between April and September of 2020. Details on the timing of the rounds in each country, as well as the response rates and number of households interviewed in each round, are presented in Table 1. We use survey weights that are disseminated in the public use datasets. These weights are calibrated to correct for selection bias associated with not interviewing households that do not own mobile phones or that cannot be reached despite repeated call attempts. The correction for selection bias allows us to provide estimates of the total number of households, adults, and children associated with any of the reported outcomes.

We examine a series of outcomes of the pandemic, including behaviour and perceptions related to Covid-19; losses in income and business revenues; changes in food security; and variation in access to resources including education, food, and medical services. Any reported statistically significant inter-temporal differences in our outcomes of interest come from statistical tests with significance set at the 95% level. The tests are conducted through linear regressions in accordance with the method outlined by Josephson et al. (2020). This analysis allows us to estimate the impacts of the pandemic, focusing on heterogeneity in effects across time. The code to reproduce all of the analysis in this chapter is available at Furbush (2021).

Tracking how people's lives are differentially affected by the Covid-19 pandemic over time can enable governments and policymakers to better understand the circumstances faced by their citizenry and to make data-driven, informed policy decisions. The longitudinal data collected through the high-frequency phone surveys and our examination of these data over time cultivate this understanding by documenting the changing consequences of the pandemic.

TABLE 1 ROUND-SPECIFIC RESPONSE RATES FOR WORLD BANK LSMS-SUPPORTED HIGH-FREQUENCY PHONE SURVEYS ON COVID-19

	Round 1	Round 2	Round 3	Round 4	Round 5
	Ethiopia				
Dates	22 Apr–13 May	14 May– 3 Jun	3 Jun– 26 Jun	27 Jul–14 Aug	24 Aug–17 Sep
Response rate	60%	96%	94%	89%	85%
No. of attempted interviews	5,374	3,249	3,241	3,249	3,249
No. of completed interviews	3,249	3,107	3,058	2,878	2,770
Total no. of households in pre-Covid-19 survey	6,770				
	Malawi				
Dates	26 May–14 Jun	2 Jul–16 Jul	12 Aug–27 Aug	14 Sep–29 Sep	
Response rate	74%	95%	94%	95%	
No. of attempted interviews	2,337	1,729	1,722	1,711	
No. of completed interviews	1,729	1,646	1,616	1,618	
Total no. of households in pre-Covid-19 survey	3,181				
	Nigeria				
Dates	20 Apr–11 May	2 Jun–16 Jun	2 Jul–16 Jul	9 Aug–24 Aug	7 Sep–21 Sep
Response rate	65%	93%	93%	95%	96%
No. of attempted interviews	3,000	1,950	1,925	1,881	1,856
No. of completed interviews	1,950	1,820	1,790	1,789	1,773
Total no. of households in pre-Covid-19 survey	4,976				
	Uganda				
Dates	3 Jun–20 Jun	31 Jul–21 Aug	14 Sep–7 Oct		
Response rate	93%	93%	91%		
No. of attempted interviews	2,421	2,410	2,352		
No. of completed interviews	2,257	2,230	2,147		
Total no. of households in pre-Covid-19 survey	3,098				

Note: Rows report the response rate, number of attempted interviews, and number of completed interviews for each country in each round. Dates during which interviews were conducted for each round are also reported. The total number of households in the pre-COVID-19 surveys is reported in the bottom row, which does not vary by round and also includes households that do not have any phone contact information and that are outside the scope of the phone survey. The response rate is calculated as (# of completed interviews)/(# of attempted interviews). The number of attempted interviews is declining over time since the surveys do not attempt to recontact households that refuse to be interviewed in a given round.

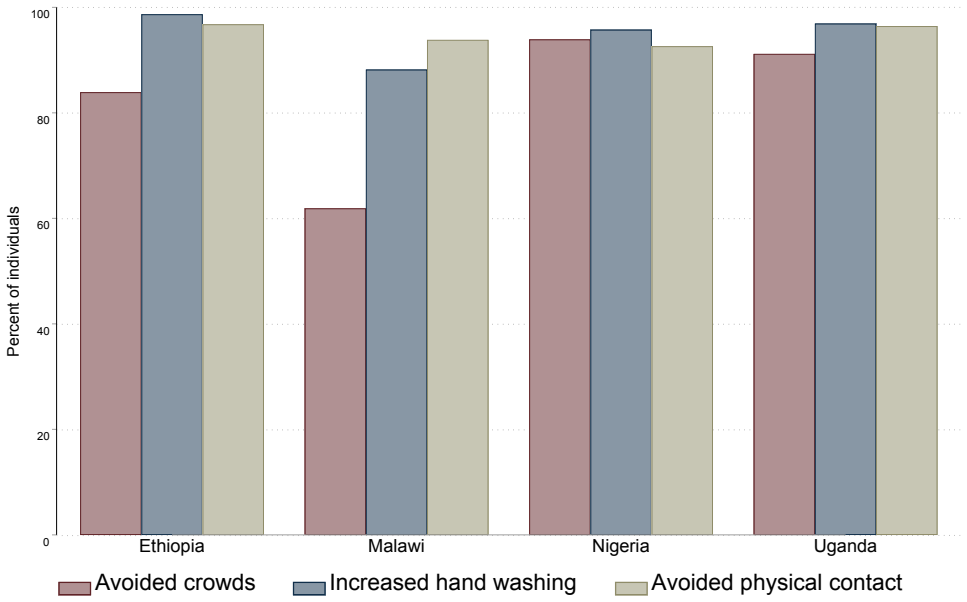
BEHAVIOUR AND PERCEPTIONS DURING COVID-19

As the SARS-CoV-2 virus spread in 2020, countries in sub-Saharan Africa followed worldwide trends by closing schools and issuing stay-at-home orders. Ethiopia closed schools and suspended public gatherings on 16 March. This was followed by the declaration of a state of emergency on 8 April, which included closing non-essential business and limiting international and domestic travel. Nigeria's response primarily occurred at the state-level. Most states closed schools and suspended large gatherings by 24 March. By early April, most states had closed all non-essential businesses and suspended inter-state travel. Uganda closed schools, limited large gatherings, and closed the international border on 18 March. By 30 March, Uganda had closed all non-essential businesses and suspended public and private transport. The President of Malawi declared a state of disaster on 20 March, which included closing schools and limiting the size of public gatherings. Following other countries, Malawi issued a stay-at-home order on 14 April. However, the order faced legal challenges, with the High Court barring the government from implementing the lockdown. As a result, Malawi, unlike the other countries in our study, instituted no stay-at-home order or lockdown.

The cross-country differences in government responses are reflected in how individuals changed their behaviour at the beginning of the pandemic to help prevent the spread of the virus (Figure 1). Using the first round of phone survey data in each country, we see that the increased adoption of handwashing was near universal, as was avoiding physical contact, in Ethiopia, Nigeria and Uganda. In Malawi, nearly 90% of individuals increased handwashing and avoided physical contact more frequently than before. However, since Malawi implemented no stay-at-home order, individuals were significantly less likely to avoid crowds compared to the three countries where gatherings and travel were limited.

In Uganda and Malawi, the behavioural change questions were asked in follow-up phone survey rounds, allowing us to estimate the number of people continuing to wash hands and avoid crowds over time (Figure 2). In both countries, we see a significant decline in the number of individuals who are avoiding crowds and washing their hands more frequently. Avoiding physical contact remained high in Malawi and Uganda, though declined significantly in Uganda relative to prior rounds. Starting in July in Malawi and August in Uganda, the phone survey also included questions about mask wearing. Wearing a mask in public increased in Malawi between July and September from below 40% to almost 90%. The already high rates of mask wearing in Uganda increased slightly between July and August. The jump in mask wearing in Malawi coincides with a national mask mandate which went into effect in September. Uganda had instituted a mask mandate in July, before the question was added to the survey.

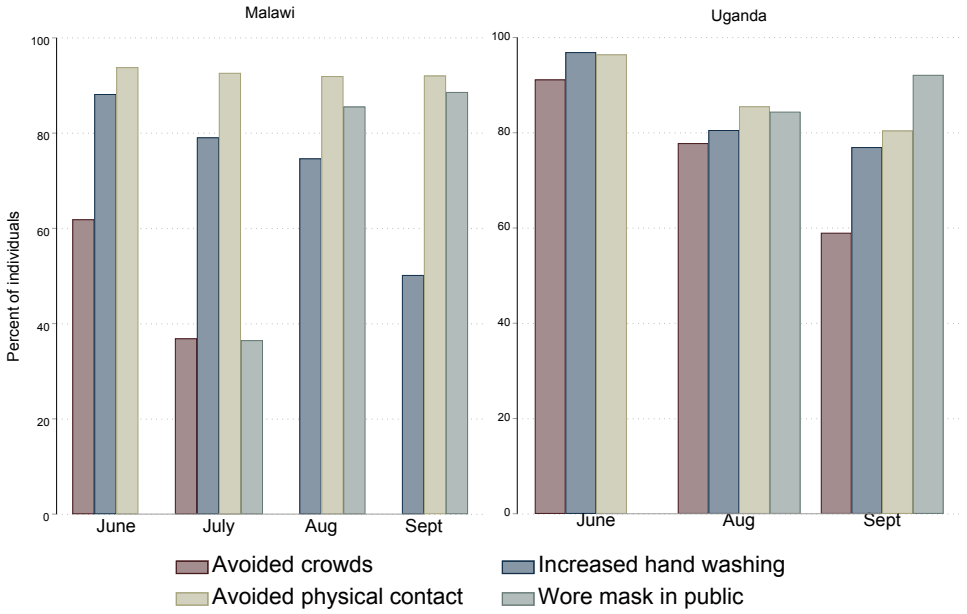
FIGURE 1 CHANGE IN BEHAVIOUR TO REDUCE EXPOSURE TO COVID-19



Note: Figure reflects first month of available data in each country, which was April for Ethiopia, May for Nigeria, and June for Malawi and Uganda.

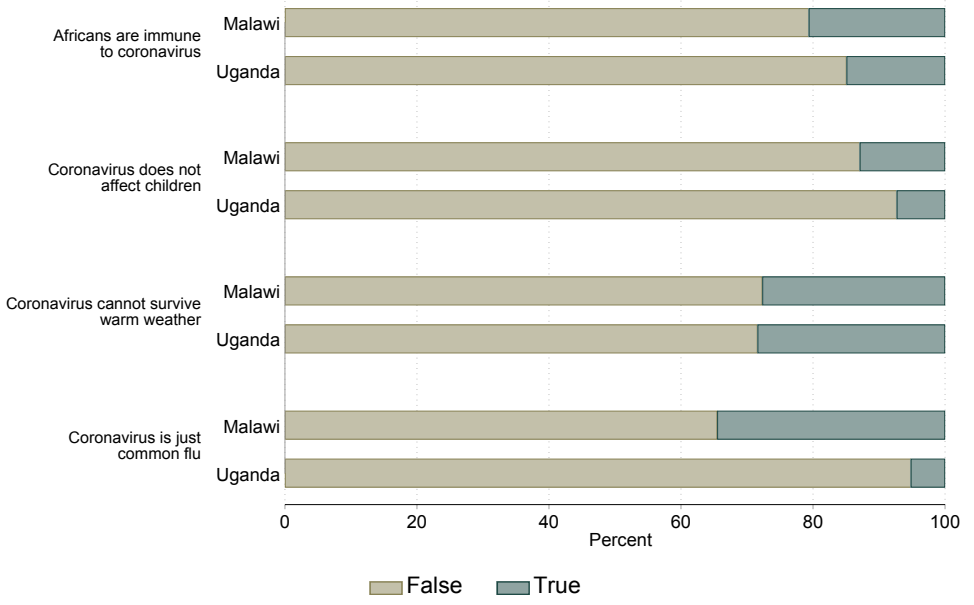
The low level of behavioural change during the early months of the pandemic in Malawi is reflected in a greater prevalence of beliefs in common misconceptions and false claims about the virus and the disease (Figure 3). As with behavioural change over time, only the phone surveys in Malawi and Uganda asked these questions (but limited them to the first phone survey round). Relative to Ugandans, Malawians are significantly more likely to believe that Africans are immune to the virus, that children are not affected by the virus, and that the disease is no different than the common flu. Despite Malawians' increased likelihood to hold several of these false beliefs, the sheer number of people in Uganda that lack accurate information about the virus and disease is greater than in Malawi. The most common false belief in Malawi is that the virus is just the common flu, believed by an estimated 3.1 million individuals. The most common false belief in Uganda is that the virus cannot survive warm weather, with an estimated 6.1 million individuals believing this myth. An estimated one to three million individuals in each country subscribe to the other false beliefs, representing a substantial share of the population. The prevalence of false beliefs about the disease have been noted in nearly every country in the world and demonstrate the continued need for clear and accurate messaging to avoid the far-reaching spread of information of questionable quality (Gallotti et al. 2020).

FIGURE 2 INTER-TEMPORAL CHANGE IN BEHAVIOUR TO REDUCE EXPOSURE TO COVID-19



Note: Figure presents data from each wave for Malawi and Uganda. Behavioural questions were only asked in the first round for Ethiopia and Nigeria. Questions regarding mask wearing were introduced into the Malawi survey in July and into the Uganda survey in August.

FIGURE 3 FALSE BELIEFS REGARDING COVID-19

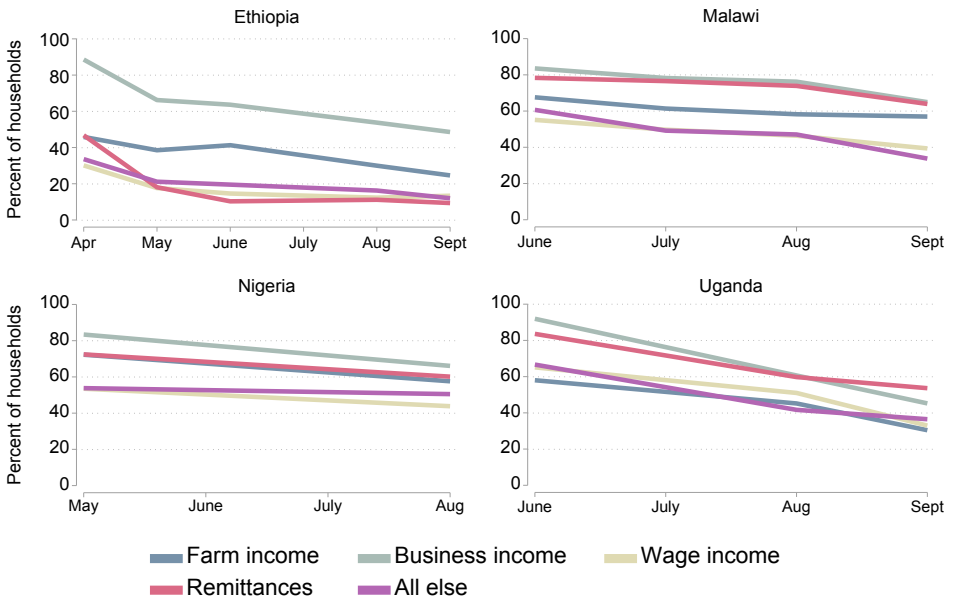


Note: Questions about false beliefs were only asked in Malawi and Uganda and only in the first round.

ECONOMIC AND SOCIAL CHALLENGES OF COVID-19

As countries moved to curb the spread of the virus, millions of individuals in Ethiopia, Malawi, Nigeria, and Uganda found themselves out of work, both in the formal and informal labour markets (Nonvide 2020). In the months immediately following the imposition of Covid-19-related restrictions, Josephson et al. (2020) found that 256 million individuals in these four countries – 77% of the total population – reported a loss in income. Since that time, fewer households in all four countries reported a loss of income. In each round, the reference period for questions concerning loss of income is the prior interview, typically about a month before. So, for households asked about income in September, the question asks about how income changed since the August interview. As of August/September, Ethiopia and Uganda saw the most substantial decline in income loss relative to the previous month, particularly with regards to business income. In the early months, over 85% of households in Ethiopia and 90% in Uganda reported loss of income from this source. By September, the share of households reporting decreased business income relative to the previous interview period fell to 50% in Ethiopia and 44% in Uganda – while still representing a substantial share of the population. Though these findings suggest that income recovered relative to previous months, it is unclear how household income in each round compares to pre-pandemic times. Further, in Malawi and Nigeria the monthly recovery of income was less substantial. In these countries, a majority of households still reported a decline in income in the last available survey round. These findings suggest that economic recovery may be slow without additional assistance by governments and the international development community.

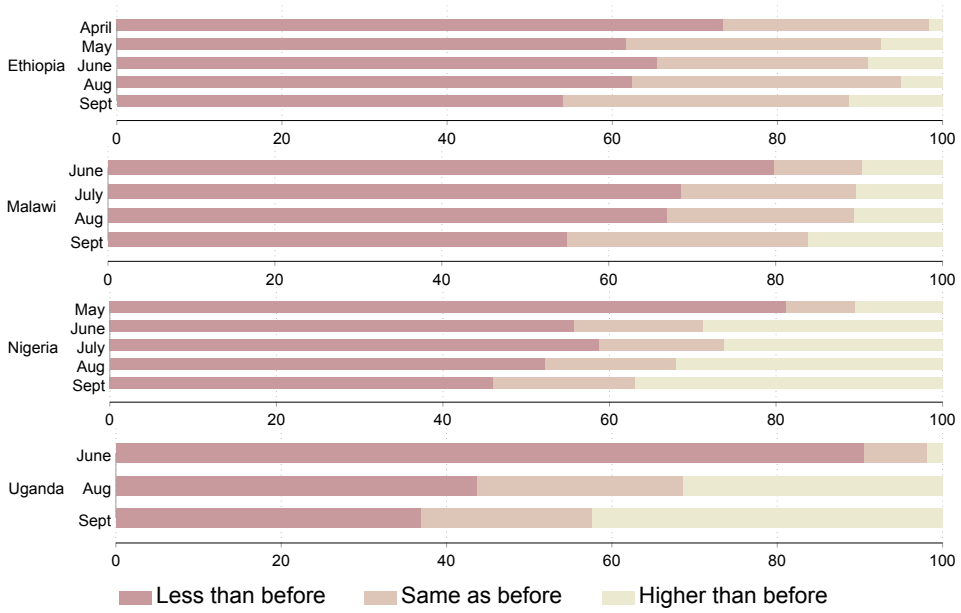
FIGURE 4 HOUSEHOLDS REPORTING DECREASES IN INCOME



Note: To have lost income, the household must have previously received income from that source in the previous 12 months. The reference period for the first round was the pre-Covid-19 period. For all subsequent rounds, the reference period was the period since the last phone call.

As with income, many households saw a recovery in non-farm enterprise (NFE) revenues. The findings are encouraging, as they reveal consistent recovery in NFE revenues, particularly in Malawi and Uganda. Each month, households in these countries reported NFE revenue improved relative to the month previous. There is also evidence of recovery in Ethiopia and Nigeria, though the recovery appears to be bumpier in these two countries. In Ethiopia, after an improvement in NFE revenue in May and June, there was a reversion in August relative to June. This may be related to the Hachalu Hundessa riots that occurred in late June and early July across much of the Oromia Region. The riots resulted in the imposition of business and travel restrictions by the federal government. A similar decline in NFE revenues occurred in Nigeria in July, though the reasons are not readily obvious. Some good news is that NFE revenues appear to be back on a trajectory towards recovery in both Ethiopia and Nigeria after July.

FIGURE 5 HOUSEHOLDS REPORTING CHANGE IN BUSINESS REVENUE (%)



Note: Business revenue refers to revenue from non-farm enterprises (NFEs). To have lost revenue, the household must have previously received revenue from their NFE in the previous 12 months. The reference period for the first round was the pre-Covid-19 period. For all subsequent rounds, the reference period was the period since the last phone call.

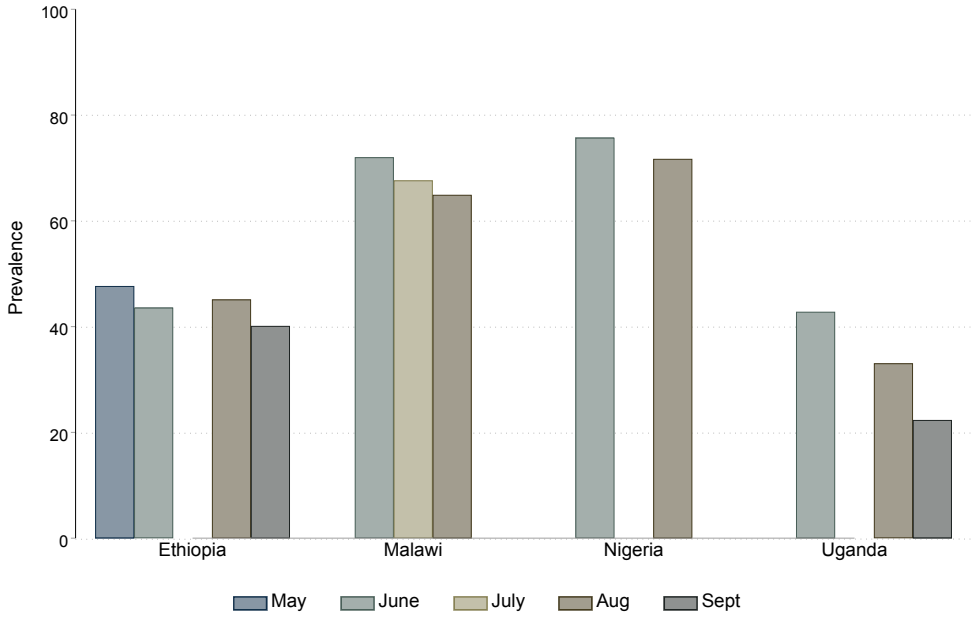
To further understand the impacts of the pandemic on households, we estimate the prevalence of moderate or severe food insecurity among the adult population, as measured by the Food Insecurity Experience Scale (FIES) (Figure 6). The FIES is an experience-based metric of food insecurity severity, which relies on people's direct responses to questions about their experiences with access to adequate food. This metric makes it possible to compare prevalence rates of food insecurity across national and sub-national populations (FAO, n.d.).

In the high-frequency phone surveys that inform our analyses, the FIES questions had a reference period of the last 30 days. Following the FIES standard survey model, eight questions were asked, aimed to capture whether the respondent or other adult household members: (1) were worried they would not have enough to eat, (2) were unable to eat healthy and nutritious food, (3) ate only a few kinds of foods, (4) had to skip a meal, (5) ate less than they thought they should, (6) ran out of food, (7) were hungry but did not eat, or (8) went without eating for a whole day. For information on how the FIES is calculated, see Josephson et al. (2020).

Food insecurity prevalence was highest in Malawi and Nigeria, with the prevalence of moderate or severe food insecurity greater than 60% among the adult population in each round of the survey. However, the prevalence of food insecurity in both countries declined across time. While the declines were relatively modest, they are statistically

significant. In Uganda and Ethiopia, most rounds had a statistically significant change in food insecurity from the prior round. In both countries, the prevalence of moderate or severe food insecurity remained lower than the levels in Malawi and Nigeria, with the prevalence being just over 40% among the adult population, at its highest level. Over the period of June to August for which food insecurity estimates are available for all countries, the cross-country prevalence of moderate or severe food insecurity among the adult population declined from 61%, representing approximately 100.3 million adults across all countries, to 58%, representing 97.6 million adults.

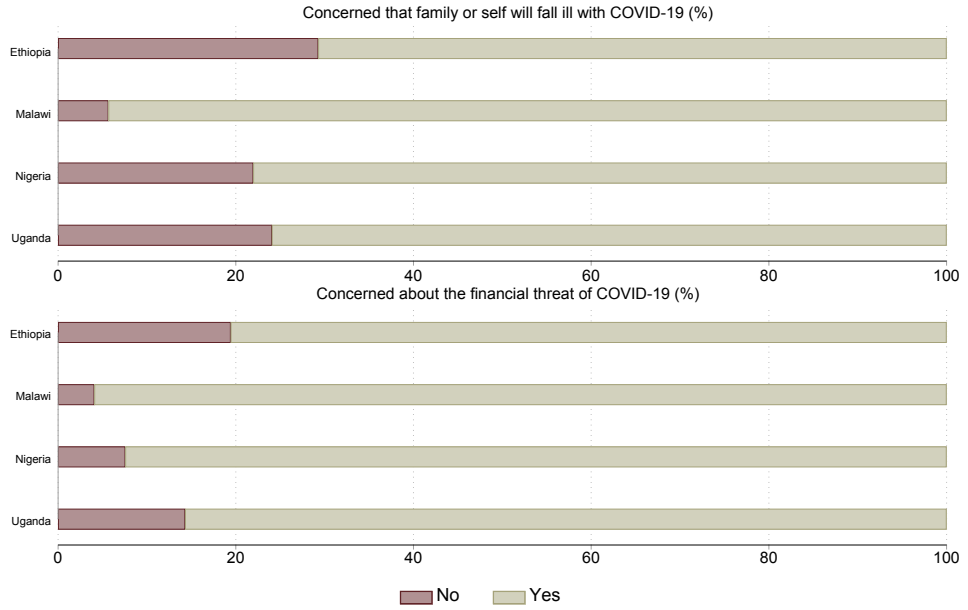
FIGURE 6 PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY



Note: FIES is calculated in reference to the adult population in each country following Josephson et al. (2020).

To understand how households are coping with the pandemic, respondents were asked about their concerns related to Covid-19, including if they are worried about falling ill with Covid-19 and if they are concerned about the financial threat that the virus poses. In the first phone survey rounds with available data, the concerns about contracting the virus and managing the financial ramifications were high across the four countries, ranging from about 70% of households in Ethiopia to over 95% in Malawi (Figure 7). The high level of concern in Malawi may be related to the lack of COVD-19 restrictions within the country relative to other countries. As discussed above, the Malawian president's efforts to install a lockdown were blocked by the country's High Court, making Malawi the only one of the four countries not to institute a stay-at-home order or lockdown. These differences in policy may have affected the level of concerns among Malawians.

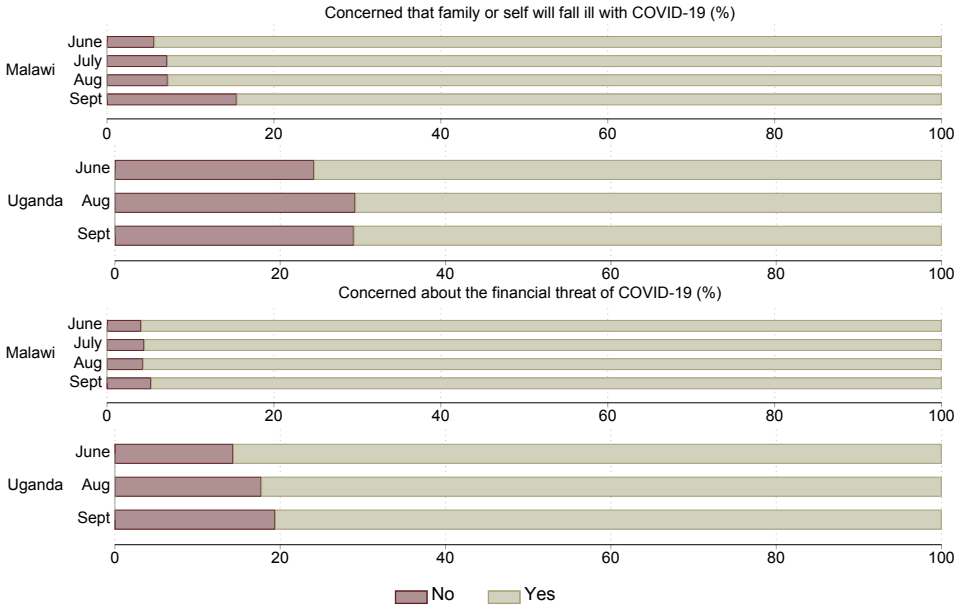
FIGURE 7 CONCERNED ABOUT FALLING ILL AND FINANCIAL THREAT OF COVID-19 IN THE FIRST PHONE SURVEY ROUND



Note: The figure is based on the data from the first phone survey round in each country. The data for Ethiopia, Malawi, and Uganda are from June while the data for Nigeria are from May.

The same questions regarding concerns were asked in subsequent rounds in Malawi and Uganda, allowing for comparisons across time (Figure 8). In Malawi, the share of respondents that were concerned about falling ill with Covid-19 declined significantly, from over 92% in June to 84% in September. This coincides with the implementation of a mask mandate in the country, which went into effect in September. Compared to Malawi, the share of respondents that were concerned about falling ill with Covid-19 remained stable in Uganda, though at lower levels, ranging from 75% in June to 71% in September. The level of concern about the financial threat of Covid-19 was unchanged in subsequent rounds in both Malawi and Uganda, with no statistically significant changes in Malawi across time and statistically significant, though modest, decline in Uganda. The latter finding is correlated with the significant increase in income and NFE revenues in Uganda (as reported in Figures 4 and 5).

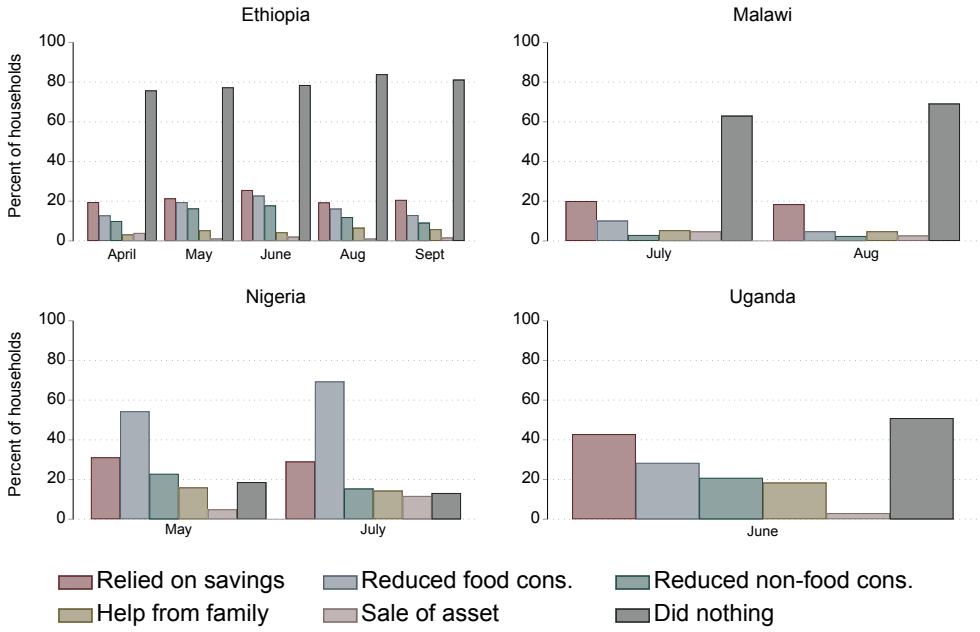
FIGURE 8 CONCERNED ABOUT FALLING ILL AND FINANCIAL THREAT OF COVID-19 OVER TIME



ADAPTATION AND RESILIENCE TO COVID-19

The combination of the spread of Covid-19 itself as well as the attempts to limit its spread led to households suffering a variety of shocks to their economic wellbeing. These shocks were not limited to Covid-19-related illness or death of an income earner, but also included job loss, business closure, disruption of farming activity, rising input prices, falling output prices, or increasing food prices. Around 42% of households across the four countries reported suffering from one of these shocks in the early months of the pandemic. To cope with these shocks, households adopted a number of strategies (Figure 9). The estimates for adoption of a coping strategy are conditional on the experience of a shock – that is, to employ a coping strategy, a household must have experienced a shock since mid-March. More than 40% of the household population across all countries and survey rounds, adopted at least one coping strategy. These strategies include living off of savings, selling assets, reducing food or non-food consumption, receiving help from family, and receiving government assistance. In all countries, the most frequently used coping strategies were to rely on savings and to reduce food consumption. However, it is striking that many households in Ethiopia, Malawi, and Uganda did nothing to cope with an experienced shock. Nigeria stands apart in this regard, as Nigerian households relied heavily on reduction of food consumption. This comports with the elevated levels of food insecurity in Nigeria (as reported in Figure 6).

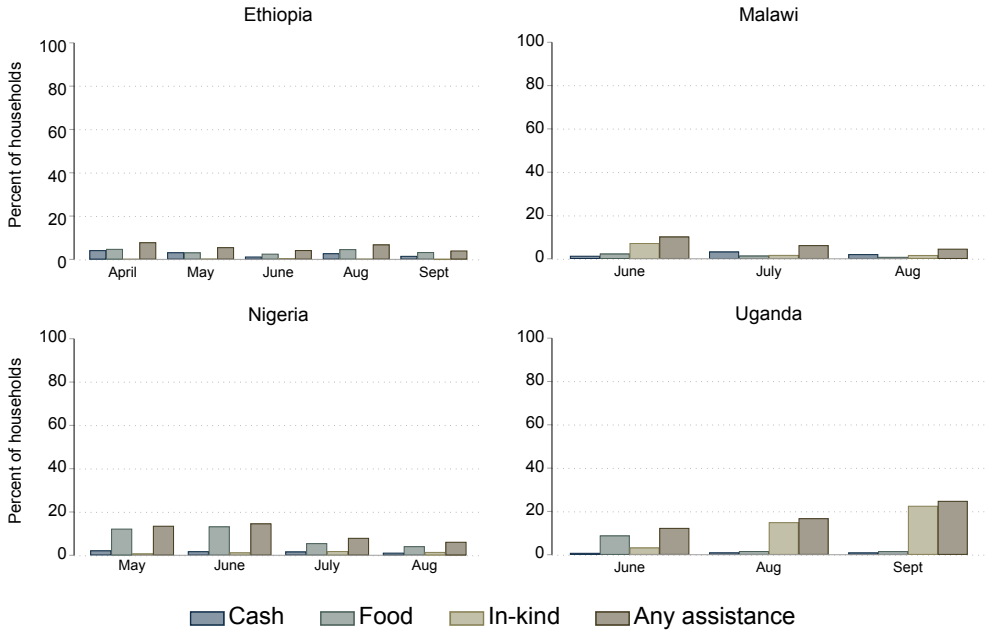
FIGURE 9 HOUSEHOLDS REPORTING USE OF COPING STRATEGY



Note: To adopt a coping strategy, a household must have experienced a shock to their livelihood since mid-March.

Further, the phone surveys asked respondents whether they received social assistance from governments, NGOs, and other sources – either as cash, food, or in-kind. Despite the scope of the economic shock and the relatively high incidence of relying on negative coping strategies, the receipt of any form of social assistance remained low in all four countries (Figure 10). The vast majority of households, more than 80% of the population, reported having received no assistance of any form from any source. The incidence of receiving any social assistance is lowest in Ethiopia – no more than 10% of households reported having received any social assistance from any source in a given survey round. In Nigeria, the incidence of receiving food assistance declined in July and August, and this finding aligns with our findings related to the use of reduced food consumptions as a coping strategy (Figure 9). Uganda is the only country where households reported an increase in assistance over the rounds – in particular, in-kind assistance grew rapidly, with about 23% of households receiving in-kind assistance (in the form of soap, masks, and mosquito nets) in August compared to less than 3% in June.

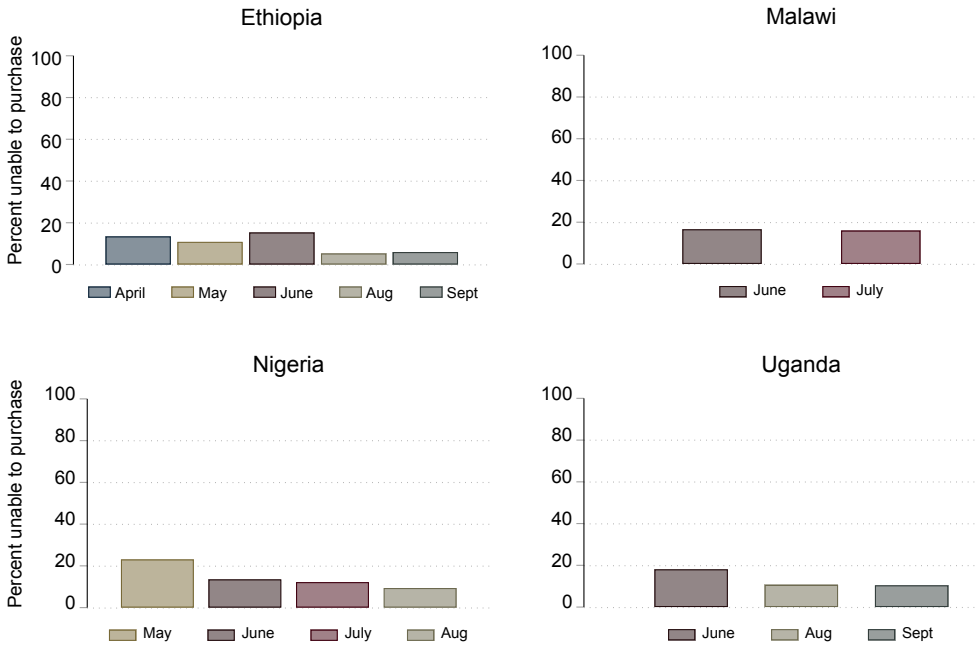
FIGURE 10 HOUSEHOLDS RECEIVING SOCIAL ASSISTANCE



Note: The reference period for the first round was the period since mid-March. For all subsequent rounds, the reference period was the period since the last phone call. Households were asked for both the type of assistance and its source (government, NGO, religious organizations, international organizations, volunteers, or other sources).

The challenges of coping with the impacts of the pandemic were exacerbated by the inability of households to access basic necessities, including medical services (Figure 11) and staple foods (Figure 12). Conditional on having sought medical services, between 5% and 23% of households were unable to access the services in months for which data is available, with the highest rates in Nigeria in May and lowest in Ethiopia in August. Of those unable to access medical care, the most common inhibitor reported in Ethiopia, Nigeria, and Uganda was lack of money, with 50%, 79%, and 83% citing the issue, respectively. By contrast, only 22% of Malawians who sought medical services reported lack of money as a hindrance, while 36% reported no medical personnel and 13% reported the facility was full. The share of household unable to access medical services declined significantly between the first and most recent round of available data in each country, except Malawi, where data are only available for June and July. Generally, the ability of most households to get the medical attention they seek is encouraging and is consistent across time, suggesting that these countries are not facing an immediate strain on their health sector. This picture aligns with household experience regarding access to medicine, where only a minority of households (34% or less in each country and round) report an inability to purchase the medicine they need. Fortunately, a majority of households can access medical care, including both medicine and services, though that should not obscure the fact that many households across all countries struggle to obtain these basic necessities.

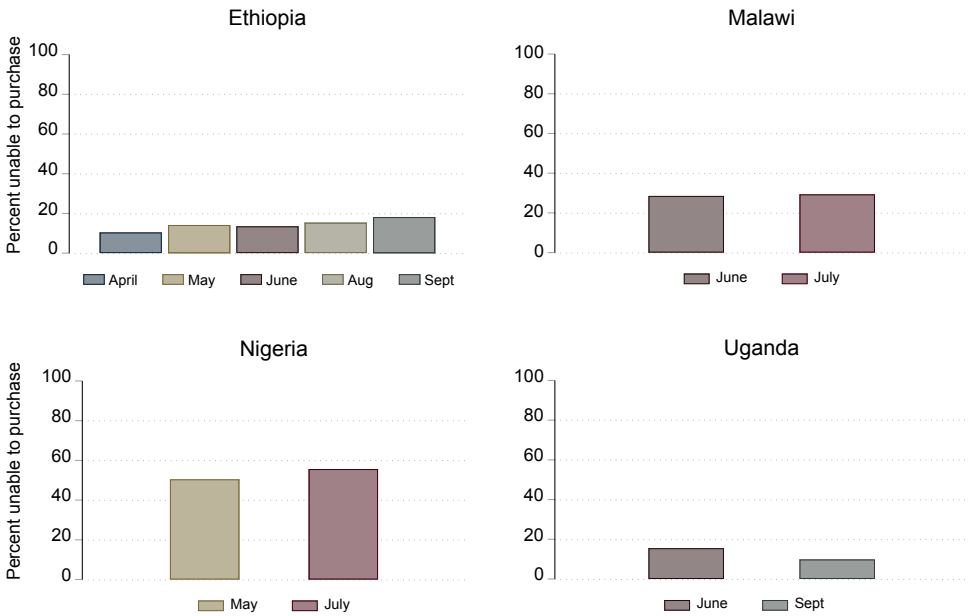
FIGURE 11 SHARE OF HOUSEHOLDS UNABLE TO ACCESS MEDICAL SERVICES



Note: A household's ability or inability to purchase medical services is conditional on that household having sought to obtain medical care.

Access to staple foods, on the other hand, varied greatly from country to country. Less than 20% of households in Uganda and Ethiopia reported difficulties accessing staple foods, while more than 40% of households in Nigeria reported similar challenges. In Nigeria and Ethiopia, accessing food was increasingly difficult over time, though these changes are only significant in Ethiopia. Conversely, in Uganda difficulties decreased significantly over time. In Malawi, access remained relatively constant at just under 30% of households unable to access staple foods in June and July. In Ethiopia and Nigeria, households were asked which specific staples they struggled to obtain. In Ethiopia, households consistently struggled to access teff, with between 36% and 43% of households unable to buy the teff they need from month to month. Of those unable to access teff, about 60% of households were unable to access the food due to decreased income, and 34% were unable to access the food due to an increase in price. Similarly, in Nigeria, where households reported a relatively high prevalence of food insecurity, households indicated issues accessing yams. Of the over 60% of households unable to buy the yams they need, 81% report lack of money as a key inhibitor and 13% cited an increase in price as an issue in securing the food.

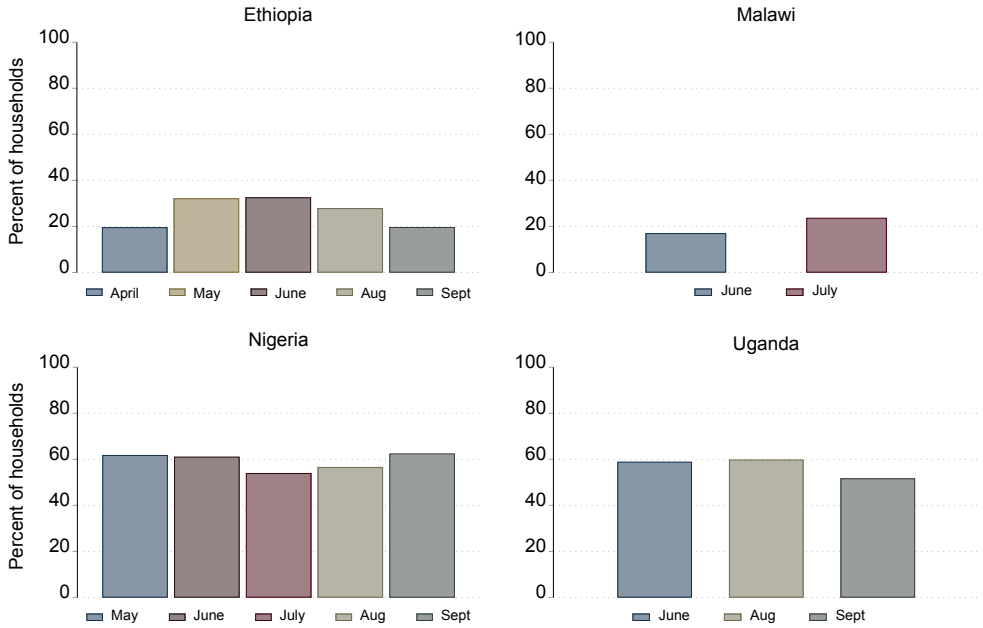
FIGURE 12 SHARE OF HOUSEHOLDS UNABLE TO ACCESS STAPLE FOODS



Note: A household's ability or inability to purchase staple foods is conditional on that household having sought to obtain staple food not already in their possession.

Prior to the onset of the pandemic, substantial worldwide progress had been made towards achieving Millennium Development Goal 2: universal primary education. As of 2015, primary school enrolment rates in low- and middle-income countries had reached 91% (United Nations 2015). In our data, an estimated 96% of households with school-aged children had their children attending school before the outbreak (Josephson et al. 2020). However, following school closures, the incidence of children who were previously attending school engaging in any learning activity fell to an estimated 46% in the first months of the pandemic. Children's ability to engage in learning activities varied across country and across time (Figure 13). In Ethiopia, only 20% of school-aged children were engaged in any sort of learning activity immediately after school closures. This number increased through June but then, following the Hachalu Hundessa riots, began to fall. In the other three countries, although child engagement in learning activities was fairly stable over time, it was much higher in Nigeria and Uganda (around 60%) than in Malawi (around 20%). The continued widespread lack of educational engagement is likely to have long term impacts on school-age children.

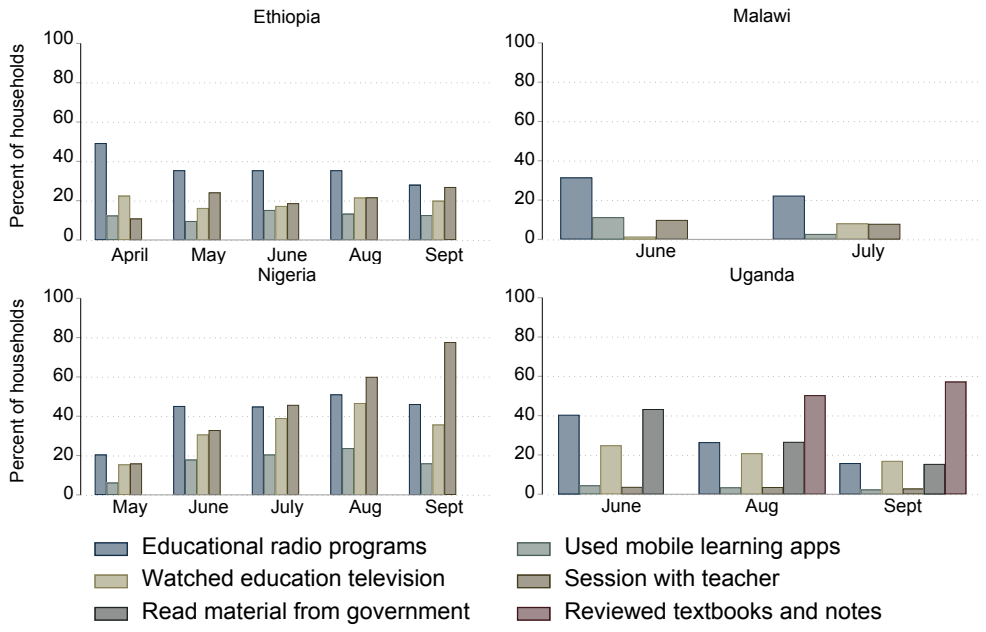
FIGURE 13 HOUSEHOLDS WITH CHILDREN ENGAGED IN LEARNING ACTIVITIES



Note: Only households with school-aged children present are considered.

Schools in all four countries remained closed through July, and countries began phased-in re-openings between August and October. Given the extended period without traditional classes, households with school-aged children sought out new ways to re-engage in learning activities. Households used technologies, such as radios, televisions, and mobile learning apps to try and mitigate educational losses (Figure 14). Educational radio programmes were commonly used by households in Ethiopia, Malawi, and Nigeria, across all rounds. Further, there was an increasing incidence of sessions with a teacher or tutors for children in Ethiopia and Nigeria, coinciding with the relaxation of restrictions. Uganda employed two unique strategies of engagement: distribution of reading materials from the government, which tapered off across rounds; and reviewing textbooks and notes from past classes, which increased across rounds. Understanding the changing landscape of engagement in learning activities is important for facilitating aid and support to those families with school-aged children. There is a need to minimise the loss of educational attainment due to the global pandemic if countries are going to continue to achieve the education-related targets under the Sustainable Millennium Development Goals.

FIGURE 14 HOW CHILDREN ARE ENGAGING IN LEARNING ACTIVITIES



Note: Only households with school-aged children present are considered.

SUMMARY

In order to develop policies targeted at mitigating the adverse health and economic impacts of the Covid-19 pandemic, governments and aid agencies require reliable and timely data on the present circumstances faced by households. While households began to see recovery in income, business revenues, and food security, the gains were relatively modest. Additionally, households received very little outside assistance and continued to struggle to cope with shocks and to ensure that school-aged children were engaged in educational activities.

These findings are limited as we have not compared the pandemic data with the pre-pandemic data for the same households. Further, any evidence on the evolving effects of the virus on households, individuals, and children will simply be a fleeting glimpse of a rapidly changing and dynamic disease environment. However, these findings still give a current picture of the circumstances faced by individuals in households in Ethiopia, Malawi, Nigeria, and Uganda.

While the recovery is encouraging, one must recall the disease context for these countries. Compared to countries in North America and Europe, the confirmed Covid-19 cases remain low in Ethiopia, Malawi, Nigeria, and Uganda. The picture that emerges from the data is that households saw a substantial economic hit due to the pandemic and a global economic slowdown. A concern exists that as governments in these four countries ease

restrictions, and individuals become complacent, the virus will begin to spread at rates similar to those in other parts of the world. Though so far spared the high rates of infection and mortality, countries in Africa may still experience disease burdens equivalent to those elsewhere in the world. This is especially likely since these countries will not see vaccines at sufficient levels to reduce transmission until 2022 (Khamsi 2020). Without additional assistance, households are likely to continue to suffer economically and be in a particularly precarious position if widespread outbreaks occur in those countries. Finally, our findings point to substantial scope for strengthening social protection systems to help cope with the widespread and evolving income losses, food insecurity, and insufficient access to education.

REFERENCES

Djankov, S and U Panizza (2020), *Covid-19 in Developing Economies*, CEPR Press.

Food and Agriculture Organization of the United Nations (n.d.), "Voices of the Hungry: Brining experience-based food insecurity measurement to the global level".

Furbush, A (2021), "The Evolving Socioeconomic Impact of COVID-19 in Four African Countries: Replication Code, Version 1.0", Zenodo (doi:10.5281/zenodo.4549786).

Gallotti, R, F Valle, N Castaldo, P Sacco and M De Domenico (2020), "Assessing the risks of 'infodemics' in response to Covid-19 epidemics", *Nature Human Behaviour* 4: 1285-93.

Josephson, A, T Kilic and J D Michler (2020), "Socioeconomic Impacts of Covid-19 in Four African Countries", World Bank Policy Research Working Paper No. 9466.

Khamsi, R (2020), "If a Coronavirus Vaccine Arrives, Can the World Make Enough?", *Nature* 580: 578-80.

Nonvide, G (2020), "Policy for limiting the poverty impact of Covid-19 in Africa," in S Djankov and U Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

United Nations (2015), The Millennium Development Goals Report 2015.

World Bank (2020a), Ethiopia - High-Frequency Phone Survey on Covid-19 2020.

World Bank (2020b), Malawi - High-Frequency Phone Survey on Covid-19 2020.

World Bank (2020c), Nigeria - High-Frequency Phone Survey on Covid-19 2020.

World Bank (2020d), Uganda - High-Frequency Phone Survey on Covid-19 2020.

ABOUT THE AUTHORS

Ann Furbush is a Graduate Research Assistant in the Department of Agricultural and Resource Economics at the University of Arizona.

Anna Josephson is an Assistant Professor in the Department of Agricultural and Resource Economics at the University of Arizona.

Jeffrey D. Michler is an Assistant Professor in the Department of Agricultural and Resource Economics at the University of Arizona.

Talip Kilic is a Senior Economist at the World Bank Development Data Group; a member the Living Standards Measurement Study (LSMS) team; and a core team member for the World Development Report 2021 on Data for Better Lives.

CHAPTER 8

Food security in sub-Saharan Africa in the times of Covid-19

Guigonan Serge Adjognon, Dahyeon Jeong and Arianna Legovini[1]
World Bank

INTRODUCTION

In early 2020, the Covid-19 outbreak swept across the world. Asia, Europe and North America recorded rapidly increasing numbers of cases, overwhelming ill-prepared health systems and resulting in large number of deaths. In sub-Saharan Africa (SSA), the first official cases were reported in March 2020. The pandemic led to an unprecedented economic crisis (IMF 2020) and prompted projections and warnings of impending rises in poverty and food crises from the media, development banks, and academic institutions (Djankov and Panizza 2020). Hunger was the subject of a September 2020 *New York Times* article, "The Other Way Covid Will Kill: Hunger", forewarning of a doubling in the number of people facing severe food insecurity worldwide,[2] in Asia and Africa.

Laborde et al. (2020) argued that all four pillars of food security – availability, access, utilisation, and stability – would be affected by the pandemic and called for urgent actions to prevent the food crises. Model-based simulations by the International Food Policy Research Institute (IFPRI) predicted that the direct income losses could plunge 148 million people into extreme poverty, increasing poverty rates by a staggering 20% – mostly in South Asia and SSA. Headey et al. (2020) predicted a 14.3% increase in moderate or severe wasting for children under five, resulting in an additional 6.7 million cases of wasting among children relative to pre-Covid projections.

In this chapter, we take the predictions to the data and document the impact of Covid-19 and related policies on food security using nationally representative household-level data collected pre- and post-Covid-19 in five countries in Western and Eastern Africa: Nigeria, Mali, Chad, Malawi, and Uganda. We find that average food security remained fairly stable, except in Nigeria where we observe a marked increase in moderate and severe food insecurity. We speculate that the structure of these economies and the nature of co-variate shocks explain the differential impact on food security in the different contexts. Nigeria, heavily reliant on oil exports, has borne the brunt of the crisis through a decline

1 The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the World Bank and its aÿliated organizations, or those of the Executive Directors of the World Bank or the governments they represent. All errors are our own.
2 https://www.nytimes.com/2020/09/11/business/covid-hunger-food-insecurity.html

in economic activity and government revenues. In contrast, net oil importers like Mali have experienced a net improvement in their balance of payments and fiscal resources. Meanwhile, Malawi's sustained good harvests in the last few years helped the country reduce food insecurity even during the crisis.

We further examine the heterogeneity of the impacts of the Covid-19 disruptions across urban and rural populations. Both the extent of the pandemic and the enforcement of lockdown policies might have affected urban and rural areas differently. Transmission in remote and disconnected areas is likely to be low, and while lockdown policies in SSA countries were stringent (Hale et al. 2020), enforcement was concentrated in cities and towns. Furthermore, the speed and scale of the social protection response, especially in the form of increased cash transfers to assist those most affected by the pandemic (Gentilini et al. 2020), differed greatly both within and across countries due to the financial resources available and governments' implementing capacity.

The results show that, for the most part, food security trends are similar in urban and rural areas in each country but that the direction of change differs by country. Demand shocks affected both urban and rural areas (Nigeria); and positive agricultural productivity (Malawi) or terms of trade (Mali) shocks improved both rural and urban food security.

The observed changes in food security are the result of a combination of factors: the pandemic, the policy response, and covariate shocks. They cannot be easily disentangled but can help interpret possible differences across countries that might contribute to changes in food security. Our findings do not lend support to the idea that the Covid pandemic led to large increases in food insecurity. However, food security worsened in some contexts where either the structure of the economy or covariate shocks deepened the economic crisis and reduced policy response.

FOOD SECURITY IN SUB-SAHARAN AFRICA BEFORE COVID-19

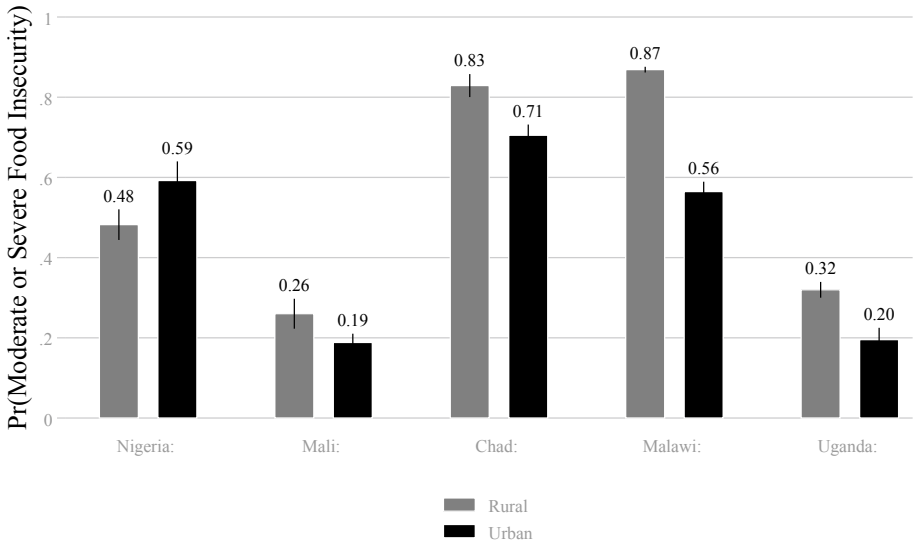
Even absent the Covid-19 outbreak, the world was not on track to achieve the target of zero hunger by 2030 of Sustainable Development Goal 2 (SDG2). Sub-Saharan Africa struggled to make meaningful progress on this target and more than 25% of the African population was already projected to face hunger by 2030 – twice the global rate. With Covid-19, the *Africa Regional Overview of Food Security and Nutrition* report (FAO, ECA, and AUC 2020) by the Food and Agriculture Organization (FAO) documents a reversal in the recent years' decline in global poverty and hunger (FAO, ECA, and AUC 2020). The FAO reports that food insecurity, measured by the prevalence of undernourishment, is on the rise, with an estimated 256 million people affected by hunger in Africa – an increase of 44 million people relative to 2014.[3] This number is likely to underestimate

3 The 2020 report on the State of Food Security and Nutrition (SOFI) estimates that globally 690 million people (8.9% of the world population) are in hunger in 2019, which means 60 million more undernourished people compared to 2014 and 10 million more than in 2018.

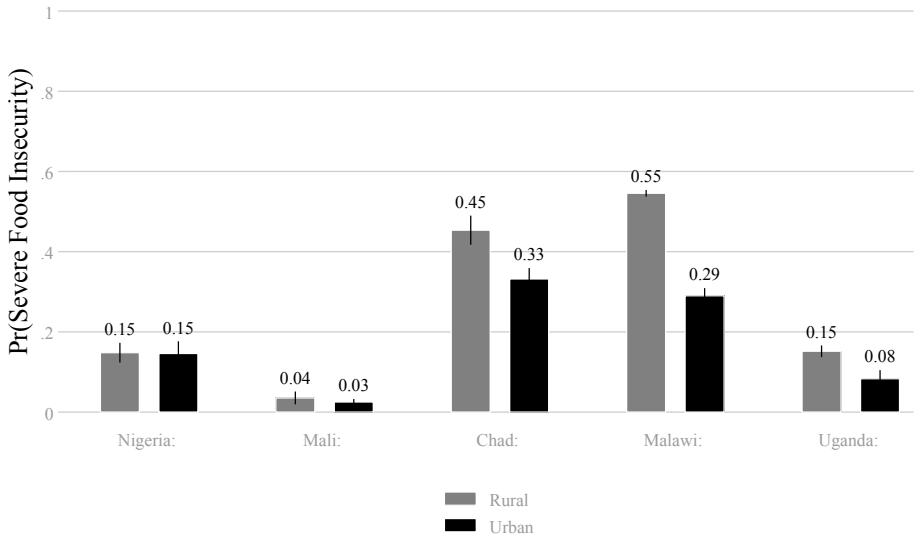
the food insecurity population. When measured by the Food Insecurity Experience Scale (FIES), there are an additional 399 million people who are moderately food insecure in the region.

FIGURE 1 PRE-PANDEMIC FOOD INSECURITY RATES IN SSA

a) Pre-Covid prevalence of food insecurity: Moderate or severe



b) Pre-Covid prevalence of food insecurity: Severe



Notes: These descriptive graphs use nationally representative data collected before the pandemic in each of these countries. The prevalence of experienced food insecurity at the moderate and severe levels are estimated through Rasch model (see Smith et al. (2017)).

Food insecurity is more prevalent in rural areas of SSA than in urban areas (Smith et al. 2017). The majority of the poor and food insecure are farmers who face the combined effects of climate shocks, conflicts, and market failures on agricultural production and commercialisation. Figure 1 shows the rates of food insecurity prevalence in rural and urban areas in Nigeria, Mali, Chad, Malawi, and Uganda based on nationally representative pre-Covid survey data. Across these countries, the proportion of people lacking regular access to safe, nutritious, and sufficient food is higher in rural areas than in urban areas, except for in Nigeria. The food insecurity rural–urban divide is even more marked when we consider more severe forms of food insecurity. As shown in the bottom panel of Figure 1, in Malawi, Mali and Uganda, the proportion of people facing severe food insecurity in rural areas is twice that in urban areas. In Chad, the rate of severe food insecurity in rural areas is 50% higher than in urban areas. Only in Nigeria do we observe no difference.

Against this background, we proceed to investigate food security trends, before and after the pandemic, in five SSA countries and across urban and rural areas.

DATA AND METHOD

To understand the effects of the Covid-19 pandemic on food security in SSA, we integrate two sources of data and generate panel data for each country. We rely on nationally representative household surveys collected before the pandemic in Nigeria, Mali, Chad, Malawi, and Uganda[4] by the relevant national statistical agency and merge them with food insecurity data based on phone surveys conducted after the Covid-19 outbreak. These phone surveys are part of a broader set of high-frequency longitudinal phone surveys being undertaken in many developing countries, with support from the World Bank, to monitor the impacts of Covid-19. The phone surveys include a subset of the larger pre-Covid questionnaire modules, and weights are adjusted to ensure that the new samples are still representative at the national level, and of urban and rural areas.[5]

For Nigeria, we use the most recent General Household Survey (GHS 4) collected in 2018/2019. The survey has a nationally representative sample of approximately 5,000 households, and includes modules on socioeconomic status, production, income, consumption, and food security. For post-outbreak data, we use the second round of the Nigeria Covid-19 phone surveys implemented in June 2020,[6] in which around 1,950 households from the original GHS 4 sample were successfully interviewed.

4 The choice of these specific countries was guided by the availability of nationally representative household survey data with a food security module before and after the pandemic outbreak.
5 Further details on all these surveys are available on the World Bank Microdata Library page.
6 The first round of the phone survey did not include a complete set of FIES questions.

For Mali, we use the Enqueˆte Harmonise´e des Conditions de Vie des Me´nages (EHCVM), which was conducted in 2018/2019 with approximately 7,000 households. We combine this with the first round of the Covid-19 longitudinal phone survey collected in Mali in May/June 2020. This phone survey includes 1,766 successfully interviewed households selected from the pre-Covid sample.

For Chad, we combine the 2018/2019 Enqueˆte sur la Consommation des Me´nages et le Secteur Informel (Ecosit 4), which includes about 7,493 households, with the first wave of the Covid-19 phone survey collected in May/June 2020, during which 1,748 households selected from the ECOSIT 4 sample were successfully interviewed.

For Uganda, we use the Uganda National Panel Survey collected in 2015/2016,[7] in combination with the first round of Covid-19 phone surveys collected in June 2020. The two datasets are merged at the district level, because the household-level linking variable is not publicly available.

The same procedure is used for Malawi, where we use the Fourth Integrated Household Survey (IHS4) collected in 2016/2017 and merge the data with the first wave of the Covid-19 phone surveys collected in June 2020, at the district level.

By creating a panel data set at the household or district level for each country, we describe how the level of food security has changed over time from before to after the pandemic outbreak, and the extent to which the trends differ across countries and between urban and rural areas.

Our main outcome measure is the Food Insecurity Experience Scale (FIES). This is an experience-based indicator that relies on people's self-reports of events that are considered symptomatic of a lack of regular access to safe and nutritious food (Ballard et al. 2013, Smith et al. 2017). The FIES was developed and proposed by the FAO as a relatively simple and reliable indicator for tracking food insecurity at the international level. The FIES instrument includes eight binary questions about experience in various domains of food insecurity, for a given reference period.[8]

The FAO recommends applying the Rasch model, based on item response theory (IRT), to estimate the severity of food insecurity, which is considered a latent trait and not directly observable. The model infers the severity of each of the experiences measured with the eight FIES questions, based on the relative frequency with which they are reported in the sample, and then assigns a probability of being moderately or severely food insecure to each observation based on the number of severe experiences reported by the household. The Rasch model improves comparability across countries relative to using the raw FIES scores, which are a mere summation of 'yes' responses to the eight FIES questions (Cafiero et al. 2016, Smith et al. 2017). Improved comparability helps

7 The more recent Uganda National Panel Survey 2018/2019 does not have the standard set of FIES questions.
8 See the Voices of Hungry website for more details: http://www.fao.org/in-action/voices-of-the- hungry/background/en/

us analyse food security trends across the five country settings for which we have data. Following the FAO's recommendation, we estimate the probability of being (1) moderately or severely food insecure, and (2) severely food insecure using the FIES App, which is an online platform that produces Rasch model parameters as well as predicted probabilities of food insecurity from an uploaded .csv file with FIES responses.[9] In our results section, we use the household-level probability of being 'moderately or severely food insecure' and 'severely food insecure' as dependent variables.

A further feature that is important for interpreting results is that the pre- and post-pandemic data use different reference periods. The reference period for the pre-pandemic FIES module is the past 12 months – i.e. respondents were asked, for each of the FIES questions, if the food insecurity event had occurred in the 12 months prior to the survey. The post-pandemic phone surveys, on the other hand, use a 30-day reference period. Nigeria is the only exception where the reference period is the past 30 days in both the pre- and post-pandemic data. The shorter reference period in the post-pandemic data could mechanically make food security appear better than pre-pandemic period as fewer food insecurity events might be reported.

To investigate the validity of this concern, we adopt a measure that can mitigate this mechanical difference in the measurement of food insecurity. First, we take advantage of the fact that a certain food security question in Nigeria was asked for both 30 days as well as 12 months. Figure A1 in the appendix shows that the difference in food insecurity prevalence by length of the reference period is fairly small. Moreover, the difference remains constant regardless of whether this particular food security question was asked before or after harvest, suggesting that the small difference between the two reference periods is not driven by agricultural seasonality. Second, we rely on the phone survey round that coincides with the lean season, the period with the highest likelihood of food insecurity.[10] Since the differences are small and we adopt the most severe of post-pandemic measures, the reference period should not compromise the validity of our conclusions.

RESULTS

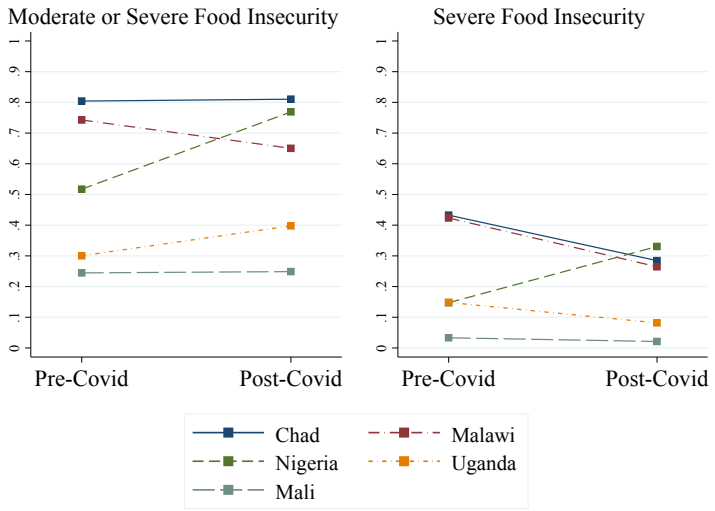
In this section, we report the incidence of 'moderate or severe' food insecurity and 'severe' food insecurity for each country, and for urban and rural areas separately. Contrary to the model-based early predictions on the effects of the pandemic on food security, we do not find empirical evidence of a drastic deterioration in household food security status across the countries we study (see Figure 2).

9 The online app is available at https://fies.shinyapps.io/ExtendedApp/. See http://www.fao.org/3/ca9318en/ca9318en.pdf for details on how the app can be used. We followed the approach specified in Josephson et al. (2020).

10 The lean season in Nigeria, Chad, and Mali is from May to August, and we use the phone survey rounds collected in May and June. The lean season in Uganda is from March to July, and we use the survey from June. Malawi has three rounds of phone surveys collected in June, July, and August, and we use the data from June when the food insecurity is higher than July and August.

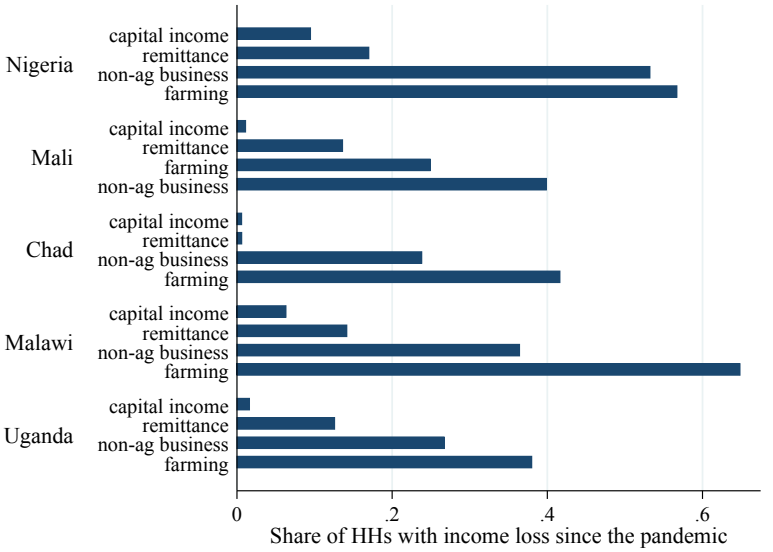
This is despite the fact that, at the time of the survey, a significant proportion of households across all five countries studied report reduced income from their main income sources during the pandemic (see Figure 3). These reports might forewarn of food crises yet to come.

FIGURE 2 OVERALL FOOD INSECURITY PREVALENCE BEFORE AND AFTER THE COVID-19 PANDEMIC



Notes: This figure plots the coefficients of the constant and the post dummy from a weighted regression for each country using household sampling weights to make the sample representative.

FIGURE 3 SELF-REPORTED INCOME LOSS



Notes: This figure plots the proportion of households reporting a reduction in income from each of the four sources since the pandemic outbreak in March: (i) income from properties, investments, or savings, (ii) remittances from family and friends, (iii) income from non-farm family business, and (iv) income from family farming, livestock or fishing.

Overall trends in food security

Figure 2 shows a simple difference in food insecurity before and after Covid. Overall moderate or severe food insecurity increased by 25 percentage points in Nigeria and 10 percentage points in Uganda. In Chad and Mali the level appears flat, and in Malawi prevalence decreased by 10 percentage points. Severe food insecurity, in the right-hand panel of Figure 2, increased by 20 percentage points in Nigeria but decreased in Malawi, Uganda, and Chad. The improvement is large and meaningful – a reduction in severe food insecurity prevalence by 15 percentage points in Malawi and Chad, and a 7 percentage point reduction in Uganda. No change is recorded in Mali.

Taken together, the data do not lend support to the hypothesis that the Covid-19 pandemic led systematically to a large deterioration in food insecurity in sub-Saharan Africa. Only one country out of the five studied experienced large increases in food insecurity (Nigeria). The overall levels of food insecurity are either unchanged (Mali) or have improved (Chad, Malawi, and Uganda). In Uganda, an increase in 'moderate or severe' food insecurity accompanied by a similar reduction in 'severe' food security suggests that the severely food insecure before the pandemic are now experiencing only a moderate level of food insecurity (see Figure A2 in the appendix for the shift in the distribution of FIES raw score in Uganda).

Change in food security in urban and rural areas

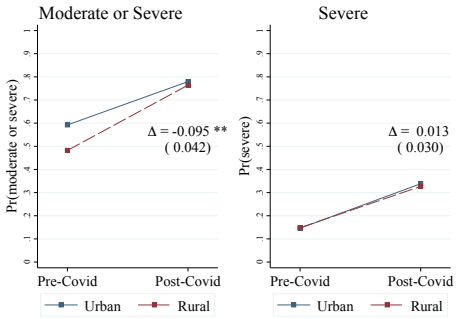
Figure 4 examines the change in food insecurity in rural versus urban areas, using a difference-in-differences estimation approach. The figure includes five panels, representing results for Nigeria, Mali, Chad, Uganda, and Malawi.[11]

In Nigeria (Figure 4, panel a), food insecurity increased more sharply in rural areas than urban areas during the Covid pandemic. The increase in food insecurity is 9.5 percentage points higher in rural areas than urban areas, which is significant at the 5% level. Given that urban food insecurity was worse before the pandemic, the urban–rural gap in the prevalence of moderate or severe food insecurity has narrowed, as shown in the figure. As for severe food insecurity rates, we observe around a 20 percentage point increase between the two measurement periods, but we find no significant differential trends between rural and urban areas.

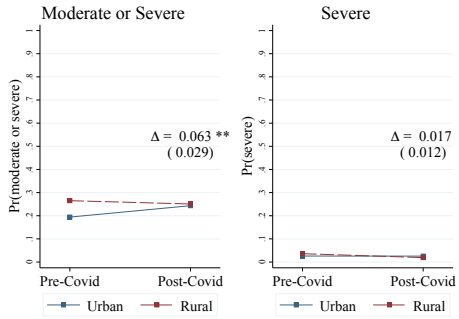
11 Figure A2 in the appendix shows how the raw FIES scores have shifted before and after Covid pandemic.

FIGURE 4 FOOD INSECURITY PREVALENCE IN SSA BEFORE AND AFTER THE COVID-19 PANDEMIC

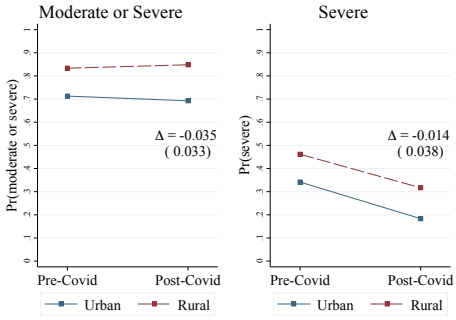
(a) Nigeria



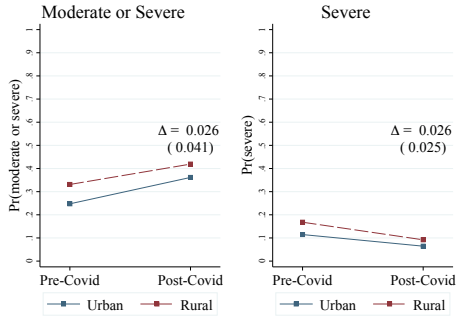
(b) Mali



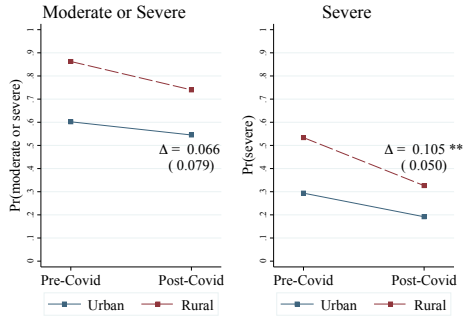
(c) Chad



(d) Uganda



(e) Malawi



Note: The delta coefficients in the figures are estimates of difference-in-differences, with standard errors in parenthesis.

In Mali, the lack of change in the overall moderate or severe food insecurity we observed in Figure 2 masks heterogeneous effects across urban and rural areas, as shown in Figure 4. Food insecurity in rural areas decreased, while food insecurity in urban areas increased. The 6 percentage point differential between urban and rural areas is significant. No differential change between rural and urban areas is observed on severe food insecurity, though.[12]

In Chad, the rates of moderate or severe food insecurity remained unchanged between the two periods, in both urban and rural areas (Figure 4, panel c). The difference-in-difference estimates suggest that there are no significant differential trends between rural and urban areas. Similarly, in Uganda (Figure 4, panel d), the trends in food insecurity are similar in urban and rural areas for both 'moderate or severe' and 'severe' levels of food insecurity.

In Malawi, where 'moderate or severe' and 'severe' food insecurity fell by 10–20 percentage points (Figure 4, panel e), the difference-in-difference estimates suggest that there are no differential trends between rural and urban areas in terms of 'moderate or severe' food insecurity. Meanwhile, 'severe' food insecurity dropped significantly more in rural areas from 53% to 33% (compared to the fall in urban areas from 30% to 20%).

Overall, urban and rural areas show similar trends in Chad and Uganda, while the differential trend we detect in Nigeria, Mali, and Malawi seems to move in the direction of reducing the initial urban–rural gap in food insecurity.

DISCUSSION

We find substantial heterogeneity in food security dynamics associated with the pandemic across the SSA countries for which data are available before and since the Covid-19 outbreak. We speculate that the structure of these economies, the nature of covariate shocks and the lockdown policies and social protection response may help explain the differential impacts on food security in the different contexts.

Economic structure and covariate shocks

The Covid crisis led to a large fall in global economic activity and oil prices (IMF 20020). The shock affected oil exporters and importers by either worsening or improving their terms of trade and fiscal revenues. With oil representing 80% of Nigerian exports and 50% of government revenues, the sharp reduction in oil prices during 2020 caused a major downfall in Nigerian economic activity and fiscal revenues. Diminished fiscal space affected the capacity of the government to respond to the crisis with a demand stimulus. The lack of an adequate expansion of social protection and other demand

12 See Adjognon et al. (2020) for further details on the food security impacts of the pandemic in Mali.

support measures might have worsened the already high levels of poverty (40%) and vulnerability (25%), placing large portions of the population at risk. An increase in urban employment affected demand for non-essential products.

In contrast, Mali – which has similar poverty rates and a long history of armed conflict, but is a net importer of oil – has benefited from the reduction in oil prices. Its expansion of social protection transfers has helped sustain livelihoods and demand. Chad, a highly fragile country ranked last on the World Bank Human Capital Index, became a net exporter of oil in 2003 and was able to leverage oil revenues to fuel the economy and substantially reduce poverty rates. While the reduction in oil prices has hit Chad's export revenues, the low levels of economic diversification and market connectivity are shielding its most vulnerable populations who are already living in self-subsistence due to high levels of regional instability.

Natural shocks also affected countries differently during the pandemic. In the case of Uganda, although the country experienced severe covariate shocks in 2020 (a locust invasion and flooding) that slowed economic activity and hampered food production, we observe some increases in moderate food insecurity in both urban and rural areas that can be linked mostly to reductions in severe food insecurity. Similarly, Malawi, a generally stable and peaceful country mostly invested in agriculture, has seen strong harvests two years in a row, which helped reduce food insecurity substantially and especially in rural areas, despite the pandemic.

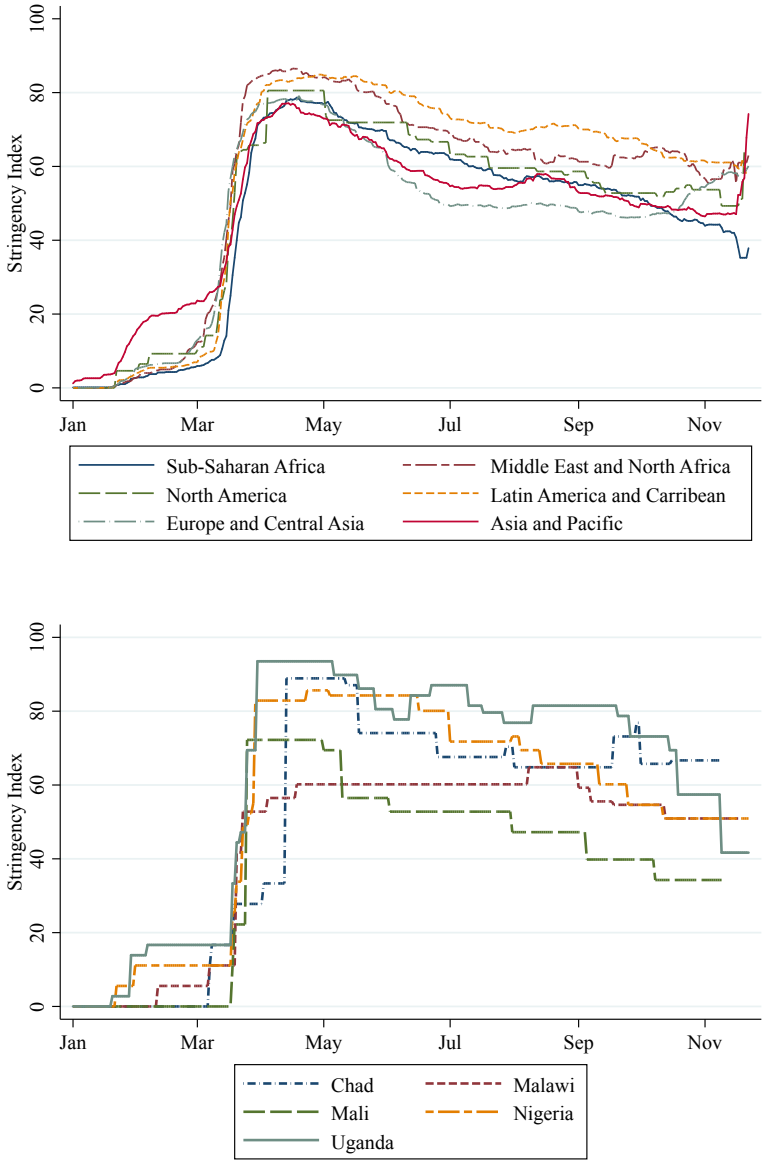
Governments scaled up social protection interventions

Governments in many developing countries rapidly scaled up social protection interventions to mitigate the impacts of the shock on their most vulnerable populations, and in so doing supported demand. In most cases, these were cash transfers and other types of social assistance, targeting particularly the poorest and most vulnerable, most of whom live in rural areas, potentially reducing the food insecurity gaps between rural and urban areas. Gentilini et al. (2020) summarise the social protection programmes implemented by countries across the globe, including our five study countries, in response to the pandemic. Four out of the five countries have put in place cash transfers as part of their Covid response, Chad being the one exception.

The weak enforcement of lockdown measures

The lockdown policies implemented in SSA, including our countries of study, were as stringent as those in developed countries, as shown in Figure 5.[13] However, the actual disruptions from those policies to households' income and food security depend on how strictly the rules are enforced.

FIGURE 5 STRINGENCY INDEX OF GOVERNMENT RESPONSES TO COVID-19

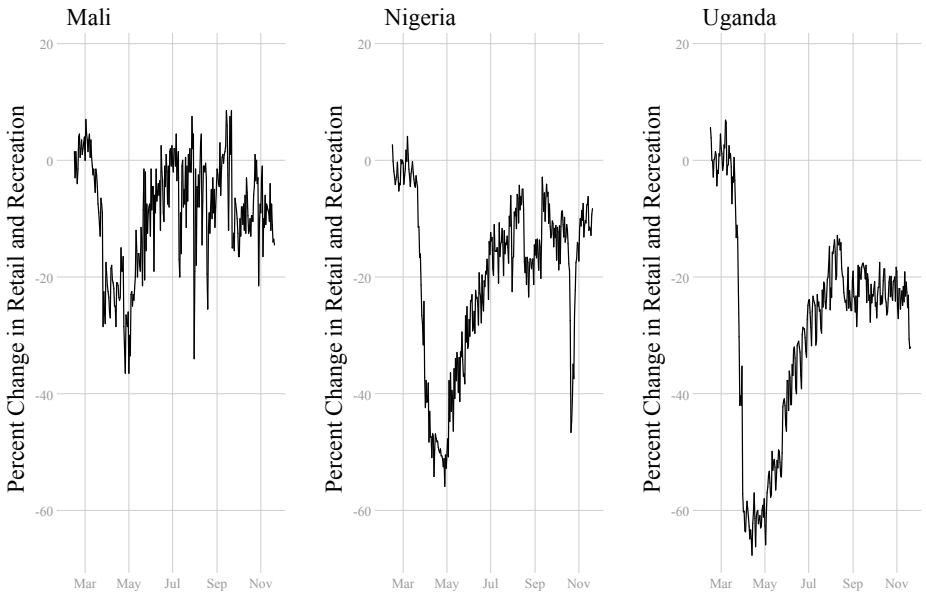


13 The figure is based on Stringency Index developed by the University of Oxford (Hale et al. 2020).

We use Google mobility data to investigate the extent to which the lockdown policies led to reductions in mobility. Figure 6 shows, for Nigeria, Mali, and Uganda, the percentage change in the time spent at different places – including in residential, retail and recreation places and on transport – relative to the pre-pandemic period.[14] The pandemic outbreak in March 2020 coincides with a large increase in time spent in residential places, and a corresponding reduction in time spent on transport and in retail/recreation places. The reduction in mobility is sharpest in Nigeria, where food insecurity increased most, but is also sharp in Uganda. The sharp reduction in mobility was soon attenuated and may not have lasted long enough to lead to a widespread rise in food insecurity.

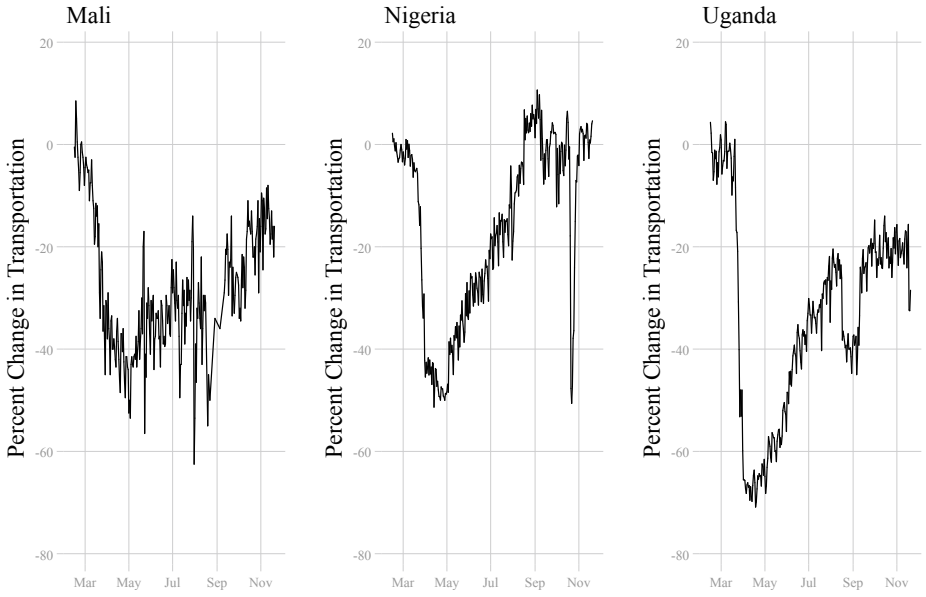
FIGURE 6 CHANGES IN MOBILITY DURING COVID-1

a) Retail and Recreation

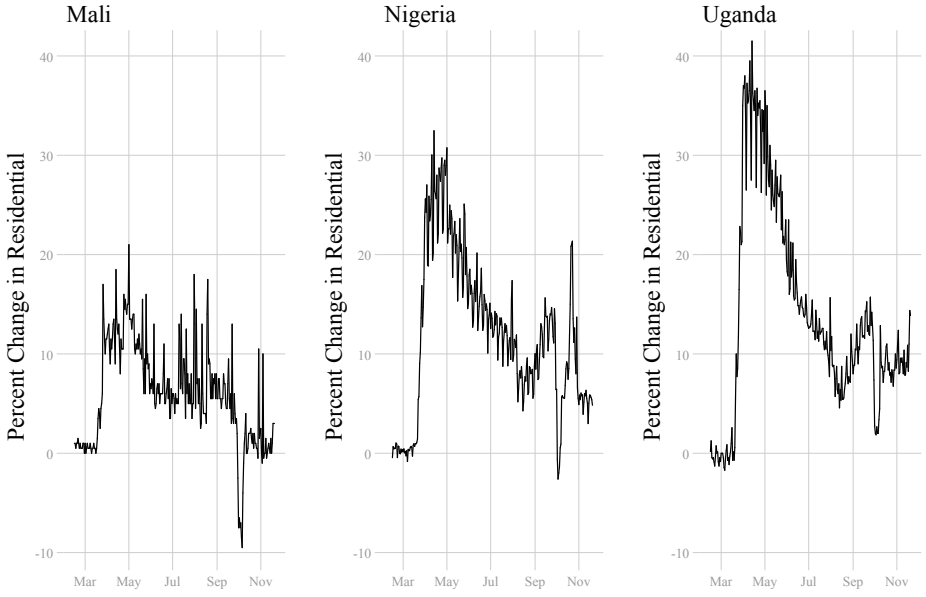


14 No mobility data were available for Chad and Malawi.

b) Transportation



c) Residential



CONCLUSIONS AND GENERAL IMPLICATIONS

By creating household survey panel data in five countries in SSA, we investigate how household food security conditions have changed during the Covid-19 pandemic. Contrary to predictions of widespread increases in food insecurity and despite household self-reports of income loss, we find food security to be fairly stable, except in Nigeria. The trends in food insecurity prevalence remained flat or even sloped down in at least three of the five countries we study. Exploring geographical heterogeneity, we observe differential rural and urban trends in three countries, where food security conditions improved more, or reduced less, in rural areas relative to urban areas, thereby mitigating existing rural–urban gaps.

We conclude that changes in food security depend on several factors and conditions that interact with the pandemic to lead to deteriorating food security conditions, as in the case of Nigeria and its oil dependency. A relaxation of lockdown measures and the scaling up of social protection programmes may have offered protection to vulnerable populations and provided a demand stimulus for the rest of the economy.

REFERENCES

Adjognon, G S, J R Bloem and A Sanoh (2020), *The Coronavirus Pandemic and Food Security: Evidence from West Africa*, The World Bank.

Ballard, T J, A W Kepple and C Cafiero (2013), "The food insecurity experience scale: Development of a global standard for monitoring hunger worldwide", FAO.

Cafiero, C, M Nord, S Viviani, M Del Grossi, T Ballard, A Kepple M Miller and C Nwosu (2016), "Methods for estimating comparable rates of food insecurity experienced by adults throughout the world", FAO.

Djankov, S and U Panizza (2020), *Covid-19 in Developing Economies*, CEPR Press.

FAO, ECA, and AUC (2020), Africa Regional Overview of Food Security and Nutrition 2019.

Gentilini, U, M Almenfi, I Orton and P Dale (2020), "Social protection and jobs responses to Covid-19", World Bank Brief.

Hale, T, A Petherick, T Phillips and S Webster (2020), "Variation in government responses to Covid-19", Blavatnik School of Government Working Paper 31.

Headey, D, R Heidkamp, S Osendarp et al. (2020), "Impacts of Covid-19 on childhood malnutrition and nutrition-related mortality", *The Lancet* 396 (10250): 519–521.

IMF (2020), *World Economic Outlook: The Great Lockdown*.

Josephson, A, T Kilic and J D Michler (2020), "Socioeconomic impacts of Covid-19 in four African countries", World Bank Policy Research Working Paper No. 9466.

Laborde, D, W Martin, J Swinnen and R Vos (2020), "Covid-19 risks to global food security", *Science* 369 (6503): 500–502.

Smith, M D, M P Rabbitt and A Coleman-Jensen (2017), "Who are the world's food insecure? New evidence from the Food and Agriculture Organization's Food Insecurity Experience Scale", *World Development* 93: 402–412.

ABOUT THE AUTHORS

Serge Adjognon is an Agricultural Economist in the Development Impact Evaluation (DIME) Team of the World Bank, with research interests at the intersection of agriculture, climate change, and food security.

Dahyeon Jeong is an Economist in the Development Impact Evaluation (DIME) unit at the World Bank. His areas of research interest are agriculture, labor, and social protection.

Arianna Legovini built and leads the Development Impact Evaluation (DIME) group of the World Bank. Since joining the Bank in 2004, she has worked to understand and develop the institutions required to engage researchers, operational staff and policymakers in improving the quality in the design and implementation of development projects.

APPENDIX

FIGURE A1 FOOD INSECURITY BY RECALL PERIOD IN NIGERIA

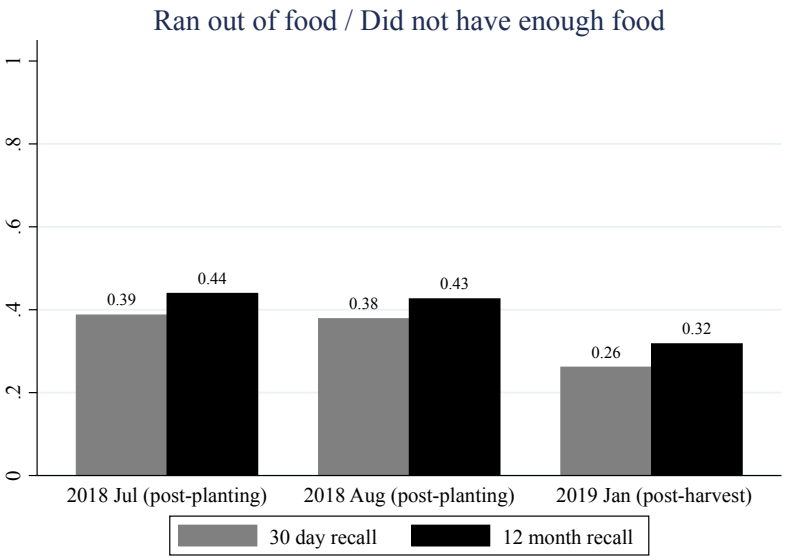
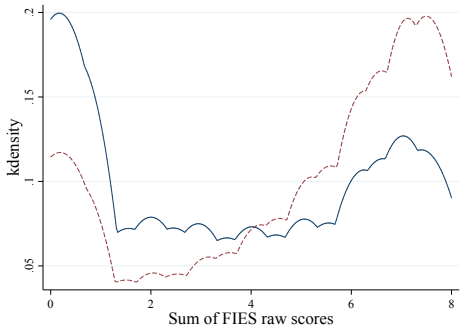
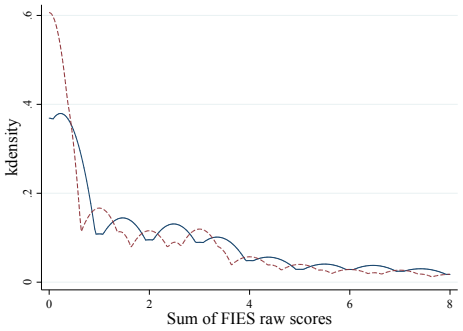


FIGURE A2 DISTRIBUTION OF FOOD INSECURITY BEFORE AND AFTER THE COVID-19 PANDEMIC

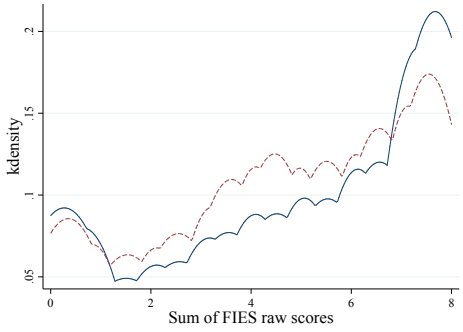
(a) Nigeria



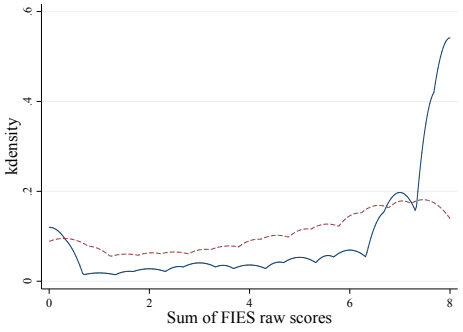
(b) Mali



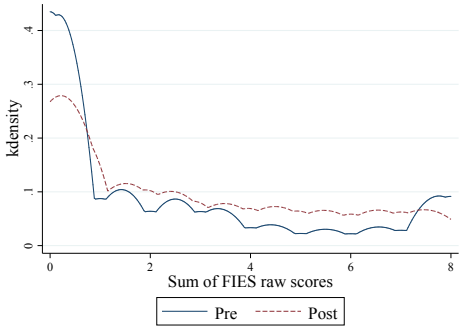
(c) Chad



(d) Uganda



(e) Malawi



INTERNATIONAL FINANCING

CHAPTER XX

Rethinking development banking in the era of Covid-19

Rabah Arezki[1]
African Development Bank, World Bank and Harvard Kennedy School

INTRODUCTION

International financial institutions (IFIs) played an important role in repairing the global economy in the years following World War II. The first World Bank loan was to France for post-war reconstruction. When it came to reconstruction and development in the decades immediately following the war, IFIs were the main game in town, in large part because international trade and financial flows had so dwindled in the two decades between World War I and World War II.

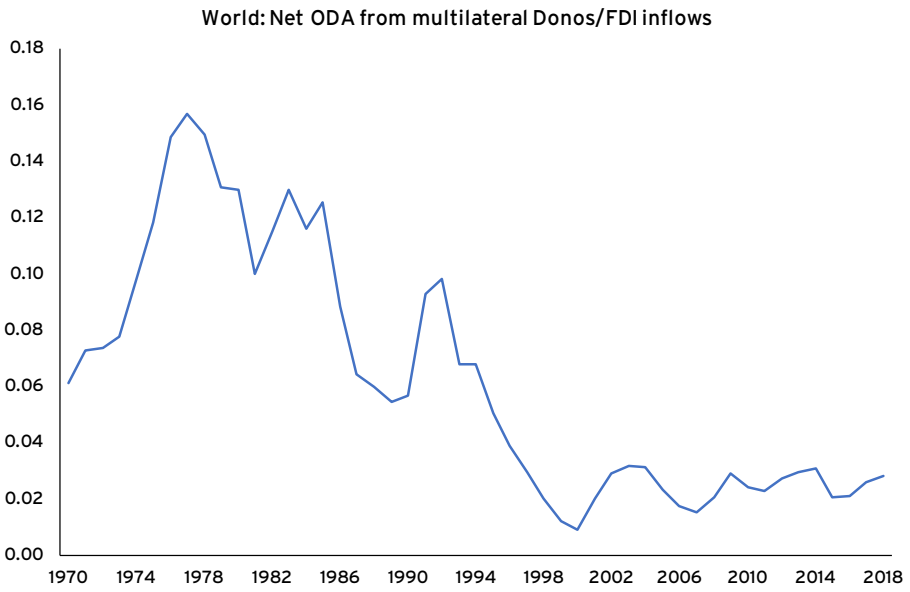
In the aftermath of the economic devastation caused by the Covid-19 pandemic, IFIs may again have to assume an outsized role to build back a better global economy than the one that existed at the end of 2019. It is true that well before the pandemic some urged using IFIs to reshape the global economy. But Covid-19 made the need for urgent change more salient – and perhaps more achievable in a crisis-like climate. This chapter explores ways development banks should rethink their roles to help a global economy rebuild better.

Fighting Covid-19 is in many ways analogous to fighting a war. Not least because both wars and pandemics demand that the international community does 'whatever it takes' to protect lives and livelihoods. In response to Covid-19, IFIs acted early to help developing countries extend needed relief to their populations.

But the IFIs quickly encountered limits on their abilities to deploy resources. IFI balance sheets are relatively small compared with the size of the global economy. The global economy today is more than 13 times larger than it was in the 1940s and the world population is more than three times bigger. In the early 1970s, multilateral development aid was about 20% of global foreign direct investment; today it is less than 5% (see Figure 1).

1 The views expressed in this chapter are my own.

FIGURE 1 AID HAS SHRUNK AS A SHARE OF CAPITAL FLOWS



Source: World Bank and UNCTAD.

Even though they have received substantial capital increases in recent years, the balance sheets of development banks have not kept up with needs.

Take Africa, where the population is expected to grow from 1.2 billion to 2.5 billion over the next 30 years. The need to build social and economic infrastructure there is enormous. Although economic growth has been steady over the past two decades, poverty continues to grow. Africa is home to more than 60% of the world's poor. Modernising and transforming economies to provide decent jobs to the African population is paramount and should become a clearer priority for IFIs. Covid-19 has made the situation even more challenging as it promises a debt crisis, has created a new normal of lower global growth, and has reduced foreign direct investment, remittances, and tourism flows.

The pandemic's effects have accelerated the need for a rethinking of development banking. This re-examination should occur on several dimensions and this chapter will focus on three important ones: how banks operate, how they set priorities with regard to economic transformation and job creation, and how they balance their ideas about economic development and their operations.

The remainder of the chapter is as follows. The next section discusses how IFIs should catalyse their resources. The third section discusses the imperative of economic transformation and jobs. The fourth section looks at the need to balance ideas and operations. The final section concludes.

CATALYSING RESOURCES

If IFIs are to remain relevant and rise to the challenge of Covid-19, they must rethink their approach. They need to catalyse their existing resources to maximise their impact on development. In this volume, Justin Sandefur shows in the case of the World Bank's Covid-19 response that the latter has been smaller than announced in net terms, and volume of aid destined for Africa has been smaller than needed for Africa. In addition, a large body of evidence has emphasised the pitfalls of development aid (Djankov et al. 2008) and the need to eradicate leakages to ensure that aid reach its intended target and pave the way for recovery after crises (see Arezki and Devarajan 2020 for a discussion of fiscal policy during Covid-19).[2] Notwithstanding these pitfalls and the need to reduce leakages from aid and in public finances in general, there are three separate but intertwined levers that IFIs can use to support developing countries, especially in Africa.

The first lever is to **support regional integration.** Covid-19 has accelerated trends toward regionalisation, especially among the major economic blocs. Africa should not be left behind. Individually, African countries are small markets, but together the region has half again as many people as the EU and the US combined and is growing rapidly. The continent must harness the power of regional domestic demand to create a single market and develop domestic productive capabilities. This closer integration would complement the many continental initiatives – including the latest, the Continental Free Trade Area (World Bank 2020). Reducing tariffs, solving poor logistics, and addressing the lack of cross-border payment systems would undoubtably help regional integration. But at the heart of the inability of African countries to integrate domestically and regionally are the barriers to firms entering or leaving crucial markets – or, as economists put it, the lack of contestability (Fox and Bakhoum 2019, Fox forthcoming). Unleashed regional demand must be accompanied by arm's-length regional regulators that foster competition and fight anti-competitive practices. Such regional regulation would prevent the perpetuation of oligarchies – the powerful few who often seize control of liberalisation attempts and channel the benefits to themselves, in the process sullying the idea of reform among citizens.

To catalyse integration, IFIs must rely on their assistance to promote pro-competitive policies and provide technical expertise in the institutional design of competent and independent national and regional regulatory bodies. IFIs should support regional integration to create intraregional trade and attract the foreign direct investment required to create millions of jobs and promote the peace and stability Africa needs. The EU, the largest integrated market in the world, could serve as a source of inspiration for African economies.

2 See also the literature on elite capture and crony capitalism impeding good development outcomes (Rijkers et al. 2018).

The second lever is to **make financial systems work for development.** Too often in developing countries, financial systems – namely, banks – do not fulfil their basic functions, which include information production, price discovery, monitoring, and payment systems, as well as resource mobilisation. When financial systems function properly, savings (both domestic and foreign) are allocated toward productive investments through the core banking functions (Arezki and Senbet 2019). Optimal allocation occurs through a combination of better macro policies and more competition in the financial system – which includes non-bank operators, which are making headway on payment systems in the continent.

But in Africa banks largely fail to properly channel domestic and foreign saving to investment. Financial systems must develop to include all normal bank functions to contribute to sustainable development. Africa crucially needs resources to build the social and economic infrastructure.

Part of the issue lies in the heavy focus of financial regulation in developing countries on risk, emphasising compliance with prudential regulations to ensure financial stability. Yet while bank regulation is geared to curb excessive risk-taking, the reality in many developing countries has been too little risk-taking, which penalises development. IFIs, which advise member countries on financial regulation, must use their influence to encourage financial systems to mobilise billions, if not trillions, of saving for investment. To do so, IFIs must account for the fact that incentives of banks are shaped by both competition in the financial system (including non-bank operators) and a country's macroeconomic stance – for example, whether the exchange rate is overvalued. Actively promoting currency swaps and the regionalisation of financial systems, including stock market and domestic currency bond markets, would be a way to increase the weight of Africa in global investors' portfolios.

The third lever is to **catalyse the private sector.** The creation of a vibrant private sector that innovates is one promising way for African economies to achieve durable and inclusive growth. To get there, governments must play an important role – not only by providing public goods (including digital ones), but by overhauling the regulatory system to minimise barriers to market entry for new businesses and market exits for inefficient companies. It also means that the state should reduce or eliminate its role as a market participant.

In March 2017, the World Bank Group set out a long-term vision of using development assistance and/or government spending to spur private sector investment – often called 'crowding in'.[3] That document, produced for discussion at the Development Committee, introduced the cascade approach to maximise finance for development (MFD) for infrastructure finance. MFD entails promoting private finance, wherever possible, to pay for the trillions of dollars of global infrastructure needed to support the UN's Sustainable

3 See https://www.devcommittee.org/sites/dc/files/download/Documentation/DC2017-0009_Maximizing_8-19.pdf

Development Goals. The MFD approach argues for a changed role for multilateral development banks (MDBs) from one in which they use development assistance directly to fund projects to one in which they use development assistance funds to encourage private finance, especially from largely untapped long-term institutional investors.

IFIs can enhance their resources and efforts through promoting upstream reforms to promote private sector development. Specifically, the upstream reforms can help unleash commercial financing by addressing market failures and removing other constraints.[4] Where risks remain high and pose a barrier to private finance, the MFD approach calls for the use of government guarantees and other risk-sharing instruments. It is only when reforms and risk mitigation cannot foster market solutions that official development assistance, including concessional loans, should be used. Similarly, because of mounting levels of public debt, government financing of infrastructure and other projects in developing countries, especially in Africa, should be used only as a last resort.

THE IMPERATIVE OF TRANSFORMATION AND JOBS

Development banks have to make their imperative the creation of good jobs and the transformation of developing economies to enable them to produce those jobs. This imperative is crucial for Africa, which, despite its solid growth over the past two decades, has been the least successful in reducing poverty of all the developing regions. It has the highest number of the world's poor and extreme poverty is increasingly in sub-Saharan Africa. Covid-19 has pushed millions more into poverty. Africa's subpar performance in terms of job creation and poverty alleviation calls for a much sharper focus on the transformation agenda. All of this compels IFIs to rethink how they approach transformation and jobs in developing regions, especially in Africa.

When economists refer to 'structural transformation', they usually mean the shift in factors of production – such as land, labour and capital – from low-productivity sectors (typically agriculture) to high-productivity ones (such as manufacturing and high-quality services). Few African economies have had success transforming structurally and many appear stuck in low-productivity mode.[5]

The Covid-19 pandemic will likely exacerbate the move away from globalisation that began early this century and promote regionalisation around big economic blocs – led by the US, the EU, and China. Regionalisation provides an opportunity for African countries to deepen regional integration and create their own value chains.

4 See Cordella (2018) for a theoretical analysis of the cascade approach.
5 See McMillan et al. (2005) for an overview and case studies of structural transformation.

In addition to structural change, 'transformation' can also refer to physical processing, which adds value to the raw materials that Africa has in abundance. Such a transformation entails a move up the value chain, which can help the continent mitigate the vagaries of commodity price fluctuations.

Whether it is cocoa, oil, metals, or wood, the lack of physical transformation is widespread and has frustrated the ability of the continent to create good jobs. Indeed, waves of mineral and hydrocarbon discoveries and an abundance of fertile land make Africa a prime source of natural resources for the rest of the world. But there are too few jobs in the primary sector and many are low paid. The continent needs to process more of its natural resources, which would not only create more good jobs but would also deal with the irony of a continent that ships away its abundant raw resources then imports billions of dollars of processed food and refined products.

Encouraging foreign or domestic investment in the processing of raw materials needs to be a policy goal of IFIs. Proactive policies to foster local content – such as the one Gabon undertook in wood processing, Botswana did in diamond cutting and Nigeria did in oil extraction – show that it is possible to move up that value chain.

Commodity producers have tried other approaches to maximising the value of their natural resource endowment. They have failed. An important one is the cartel. In response to the unfair shock they believed they received from the exploitation of natural resources, developing countries have set up producer cartels, such as the Organization of the Petroleum Exporting Countries (OPEC). While these cartels may get higher prices for the primary commodity and add revenue to government coffers, in practice advanced economies eventually find alternative suppliers (for example, non-OPEC producers) or develop alternative products (such as synthetic palm oil or shale oil). Moreover, cartels do not resolve either a producer's exposure to the boom-bust price cycle in raw commodities or the need to create a large number of good jobs. Transformation appears indispensable to getting out of the development trap.

Why has it been so difficult to transform raw products in the continent? Because low transportation costs enable transformation activities to cluster in advanced economies, relegating developing countries to supplying raw materials. During the colonial era, that structure of interdependence was imposed through coercion and military might. At the onset of independence, many developing countries tried to escape that trap by adopting import-substitution policies. But policies to encourage domestic production of goods that used to be imported largely failed – in part because lack of comparative advantage and in part because of ineffective state-owned enterprises. The paradigm has since shifted from import substitution to export promotion, which also has met with little success despite government efforts – such as establishing special zones with tax and other advantages for exporting firms. As mentioned above, fostering a vibrant private sector to promote good jobs while ensuring regulation to fight anti-competitive practices is the best approach.

Indeed, fair competition through the private sector will drive innovation and investment in ways that the public sector cannot – outside sectors where there are natural monopolies or in presence of externalities.

The continent has embarked on an ambitious Africa Continental Free Trade Area to stimulate trade in the continent. Promoting a deep agreement that fosters investment in transformation will require coordinating trade, competition, and tax policies to ensure that are no loopholes, including related to tax havens. The agreement should leverage the rising demand from the African consumer to stimulate investment in the continent to serve that demand. The experience of the EU, which started with a coal and steel community to promote narrow and deep agreement and eventually blossomed into a full-throated confederation, demonstrates the importance of avoiding shallow and broad agreements. Deepening the Africa Free Trade Agreement through focusing on transformation of agriculture products is the way the best way to start. Agrobusiness could be as pivotal for Africa as coal and steel for Europe because of the benefits of food security and jobs for the continent.

IFIs should lead the way in exploring and promoting this 'transformation' by taking stock of the 'local content' policies that scale domestically and regionally. These local content policies should be underpinned by a genuine private sector using the filter of competition to avoid a repeat of failed past policies. Only through this transformation agenda can Africa achieve the kind of job creation it needs.

ON IDEAS AND OPERATIONS

IFIs also need to ensure that their ideas about what is good for development are good in practice – that is, that development strategy produces good development projects.

IFIs including development banks have a role to play as catalysts of 'knowledge for development'. Such banks have historically brought in innovations in the development market – for instance, Panda bonds and climate change accounting. This ideas generation has lagged lately but can be encouraged through continuous attention to research. For example, recent research suggests that there is a kink in what regulation can deliver in the transparency and efficiency of procurement processes (Bosio et al. 2020). In most countries, regulation helps achieve good outcomes, when matched with implementation. This finding illustrates the importance of designing appropriate institutions in different contexts, which is particularly relevant for Africa given its complex history and institutional evolution.

Development banks have mechanisms to evaluate their projects (both ex ante and ex post) so they can learn what works and what does not – both in terms of the project itself and in terms of the organisation's strategy. But it is unclear whether these mechanisms

offer the needed feedback loops to promote the right balance between knowledge/ideas and operations, so that project design and strategy are informed by development ideas and that those ideas in turn are modified by evaluations of projects and other operations.

There are two overlapping feedback loops. The first, the *micro/project level loop*, is where much learning and self-correction happens. Most development banks evaluate achievement of project outcomes using results framework that set targets. Independent evaluation offices have also been set up in most, if not all, development banks to conduct programmatic and thematic evaluation and draw lesson learned.

The other is the *micro–macro/project-strategy level loop*. It is at this level that development institutions have been challenged, often because scaling up has been limited. In other words, the glass appears half full at the project-level feedback loop, but half empty when it comes to the macro–micro feedback loop.

The first loop is more straightforward because it involves a specific project. An integrated ex-ante and ex-post evaluation framework allows for feedback between knowledge and operations at the individual project level. Most development banks have long had these frameworks in place and they have been improved over time. Academics and think tanks have played a role in the improvements including through randomised control experiments (Banerjee and Duflo 2009). So have development bank staff members by pushing new analytical work, pressing the authorities and gaining access to new data and techniques, such as satellite imaging and phone surveys.

The micro-macro loop is less straightforward because it requires 'aggregation' of many knowledge-operation micro-loops. Aggregation requires weighting each micro-loop to enable an accurate macro assessment of replicability and, most important. scalability. The micro–macro feedback examines whether a project can be successfully redone and whether it can serve as a template for a much bigger operation. That is a difficult process and development finance institutions are struggling with how to evaluate what they see in an individual project in terms of the big ideas of the institution.

The micro–macro loop needs more work to balance knowledge and operation. Banks must think more systematically about the complementarity of more macro-structural policies and project-level interventions. We often see development institutions pushing staff to not go for 'small' projects and conduct large operations. But to be successful, the institutions need to dig deeper into the scaling-up challenge. We often refer to absorptive capacity as the main impediment to scaling up, but absorption issues remain a black box. Little work is done to unpack absorptive capacity issues and how to address them effectively.

As mentioned above, IFIs must move to balance operations and the kind of upstream policy reforms that promote private sector, promote regional integration and fix financial systems to improve the channelling of domestic and foreign saving into investment.

Scaling up solar power is a telling example of the issues. The large foreign direct investment needed can occur only if a country's financial system offers investors access to instruments such as currency swaps to hedge against risk. Moreover, important constraints linked to financial repression – actions taken by government borrowing from the financial system at low rates – also prevent scalability by limiting access to domestic financial system for would-be private sector actors.

The internal issues of the organisational structure of development banks encourage them to act as silos, which works against a broad aggregation of information between operations and strategy. Academia has a role to play even though it has an 'internal logic' (as opposed to the external logic of development banks) which get it stuck in 'corner solutions'. Indeed, the field of development economics in academia went from dominance by macroeconomics to dominance by microeconomics. Development banks can play a role in stimulating more micro–macro research that is policy-relevant in order to enhance our understanding on building state capabilities and achieve scale (see Besley and Persson 2009 on state capacity; Duflo and Banerjee 2005 for a discussion on the difficulty of integrating microeconomics and macroeconomics in the development field; Deaton 2020 for a discussion on the limitations of randomised control trials).

CONCLUSION

To confront the development challenges that the Covid-19 pandemic has exacerbated, IFIs need more resources. Yet they also must revamp their policies and strategies to embrace a more catalytic role and focus on economic transformation and jobs. For instance, to enhance development, their instruments need to be geared towards promoting more private sector development, regional regulation and improved financial systems. Development banks are unlikely to play the role they once played in terms of volumes of aid, though this volume can certainly be ramped up during crises more efficiently as argued by Justin Sandefur in this book. Value added will come when resources help institutional development.

IFIs also need to balance their big ideas about development and their actual operations, so that the two reinforce each other and achieve scale. All in all, the 'banking side' should not overshadow the 'development side' of these institutions if they want to catalyse their existing resources to help the hundreds of millions of individuals aspiring to decent jobs.

REFERENCES

Arezki, R and S Devarajan (2020), "Fiscal Policy for Covid-19 and Beyond," Future of Development, Brookings Institution.

Arezki, R and L W Senbet (2020), "Transformer la Finance au Moyen Orient et en Afrique du Nord", *Revue d'économie financière* 2019/4(136): 289–314.

Banerjee, A V and E Duflo (2005), "Growth Theory through the Lens of Development Economics", in P Aghion and S Durlauf (eds), *Handbook of Economic Growth*, Edition 1, Volume 1, Elsevier, pp. 473–552.

Banerjee, A and E Duflo (2009). "The Experimental Approach to Development Economics", *Annual Review of Economics* 1(1): 151.

Besley, T and T Persson (2009), "The Origins of State Capacity: Property Rights, Taxation, and Politics", *American Economic Review* 99(4): 1218–44.

Bosio, E, S Djankov, E L Glaeser and A Shleifer (2020), "Public Procurement in Law and Practice", NBER Working Paper No. 27188.

Cordella, T (2018), "Optimizing Finance for Development", Policy Research Working Paper 8320, World Bank.

Deaton, A (2020), "Randomization in the tropics revisited: a theme and eleven variations", in F Bédécarrats, I Guérin and F Roubaud (eds), *Randomized Control Trials in the Field of Development*, OUP.

Djankov, S, J Montalvo and M Reynal-Querol (2008), "The curse of aid", *Journal of Economic Growth* 13(3): 169–194.

McMillan, M, D Rodrik and C Sepúlveda (eds) (2005), *Structural Change, Fundamentals, and Growth: A Framework and Case Studies*, International Food Policy Research Institute.

Rijkers, B, C Freund and A Nucifora (2017), "All in the family: State capture in Tunisia", *Journal of Development Economics* 124(C): 41–59.

Fox, E M and MMor Bakhoum (2019), *Making Markets Work for Africa: Markets, Development, and Competition Law in Sub-Saharan Africa*, Oxford University Press.

Fox, E (forthcoming), "Integrating Africa by Competition and Market Policy", *Industrial Organization Journal*, Special Issue on Africa.

World Bank (2020), "Africa Continental Free Trade Area".

ABOUT THE AUTHOR

Rabah Arezki is the Chief Economist and Vice President for Economic Governance and Knowledge Management at the African Development Bank and a senior fellow at Harvard University's John F. Kennedy School of Government.

CHAPTER 10

Has the World Bank's Covid crisis lending been big enough, fast enough? Evidence on loan disbursements

Julian Duggan, Scott Morris, Justin Sandefur, and George Yang
Center for Global Development

INTRODUCTION

How well is the World Bank responding to the Covid-19 pandemic, both in sub-Saharan Africa and the rest of the developing world? A comprehensive answer would recognise that the World Bank is engaged in a diverse array of activities in its client countries – among them, the provision of personal protective equipment (PPE), support for remote learning in the education sector, and cash support for households and small businesses. It will take time to fully assess the Bank's performance across all these dimensions. But if we simply consider the World Bank as a source of much needed finance for African governments facing severe economic shocks in their countries, we can more easily gain a picture of its performance.[1]

The World Bank's performance has also come under criticism due to its decision not to participate in the G20 debt standstill arrangement, which is aimed at boosting the fiscal capacity of low-income country governments this year. Unlike the G20 member countries, the World Bank and other multilateral development banks (MDBs) will not suspend payments due from its poorest borrowers this year (the International Development Association, or 'IDA', countries). For critics, a loan payment made to the World Bank is money better spent by governments on pressing crisis needs.

To date, World Bank officials and data reporting by the institution have spotlighted new commitments to client countries. But these numbers are of limited value. Depending on the nature of the World Bank project, the actual disbursement of funds following a new commitment can take months to commence and up to a decade to complete. In a crisis period when countries face severe and immediate liquidity constraints, World Bank commitment to fund a future project under uncertain timelines matters less than the

1 We follow World Bank regional categorisations throughout. Unless otherwise noted, we use 'Africa' and 'sub-Saharan Africa' interchangeably to refer to the World Bank's Africa region (AFR), as distinct from its Middle East and North Africa (MENA) region.

actual disbursement of funding from the Bank, whether this entails quick disbursements from new crisis commitments or expedited disbursements from pre-crisis funding commitments.

The picture of World Bank crisis performance is made more complete when we consider both the flow of funds from the World Bank to client countries in the form of these disbursements *and* the contemporaneous flow of funds from these countries back to the bank in the form of loan repayments. The World Bank's *net flows* to its borrowing countries give us the best view of the degree to which the World Bank is stepping up in helping countries mount an appropriate fiscal response to the crisis, or if the Bank's response is falling short.[2]

Unfortunately, the World Bank does not report net flows at the country level on a monthly basis, making it difficult to assess performance in the midst of the current crisis. This chapter attempts to remedy this problem by bringing together various World Bank data sources to provide a current view of the Bank's net flows across countries. Using historical data, we compare the Bank's current performance to the pre-crisis period, as well as the period of the global financial crisis.

This chapter concludes with some consideration of liquidity needs in the current crisis. Even if the World Bank is doing more compared to earlier periods, is it enough? From this standpoint, what adjustments in policy and resources are needed – selective debt standstills and/or debt writedowns, greater reliance on fast-disbursing lending instruments (development policy lending instead of investment lending), or reconsideration of loan conditionality to the extent it is slowing disbursements during the crisis period?

DATA

Wherever possible, we rely on official World Bank figures in our analysis. To our knowledge, however, there is no single data set that provides comprehensive, month-by-month, country-by-country data on World Bank lending, pre- or post-pandemic. To fill this gap, we combine official World Bank reports with transaction-level data scraped from the World Bank website to construct a historical series of all IDA and International Bank for Reconstruction and Development (IBRD) commitments and disbursements from 1992 until the end of July 2020. The data also cover repayments from 2011 onwards. International Finance Corporation (IFC) loans and investments are not included.[3]

2 World Bank publications refer to 'net disbursements', defined as gross disbursements minus repayments of principal. For clarity, we follow this traditional World Bank definition but also report on an alternative measure equal to gross disbursements minus repayments of principal as well as interest and fees, which we refer to as 'net flows'.

3 The combined data set is available for download at https://cgdev.org/worldbank_disbursements, along with the Python code to scrape the World Bank website, and R and Stata programs to reproduce all the tables and graphs in this chapter.

We combine three main World Bank sources:[4]

- (**A**) **'Projects': The universe of World Bank projects**. The World Bank operations department posts a full set of historical World Bank projects. This list ostensibly includes the universe of all World Bank projects, including 19,427 IBRD loans and IDA grants or credits approved by the board from 1947 up to mid-2020.
- (**B**) **'Transactions': Historical transaction-level data on disbursements and repayments**. The Project List provides only project-level information recorded at or around the time of board approval. However, the hyperlinks to individual project pages record "Detailed Financial Activity as of August 31, 2020," reporting transaction-level dates and amounts for each new disbursement tranche or repayment. An example can be seen here (scroll down). Comparing these transactions to the universe of projects in (A), we can corroborate that we have reliable coverage for projects initiated between 1992 and 2019.

  The missing transactions for older projects pose a challenge for studying disbursements and (more so) repayments in later years, as disbursements typically occur over a period of seven years, and repayments occur over 20 to 30 years and occasionally longer. Missing transactions also occur for projects approved recently in 2020, as the project-specific websites are not current in some cases. We can fill most of these gaps using our third data source, but check our data for robustness by comparing our estimates to national and global totals reported separately by the World Bank.
- (**C**) **'Balances': Current disbursement and repayment totals to date, by project**. The World Bank publishes up-to-date project-level information on outstanding balances and totals disbursed and repaid to date in "IRBD Statement of Loans—Latest Available Snapshot" and the equivalent "IDA Statement of Credits and Grants—Latest Available Snapshot." These monthly snapshots provide project level totals and go back to April of 2011. We construct month-by-month disbursements, repayments, and commitments by subtracting project totals from prior months for projects not included in our transaction-level dataset (B).

Since we know that we are missing many projects prior to 1992, some of which are still giving repayments on principal, relying on scraped repayment values alone (Data Source B) will underestimate total repayments. We fill this gap by adding in these imputed monthly repayments of principal from the World Bank snapshot (Data Source C).[5] For 2020, we add in imputed disbursements, repayments, and commitments.

4 For further details of the data construction, please see the appendix in Duggan et al. (2020).

5 We have no direct measure of interest and fee payments for these missing 2020 transactions. However, given that most of the missing loans were issued prior to 1992, it is likely that unrecorded repayments in 2020 consist primarily of payments on principal.

Combining these pieces – i.e. downloading (A), scraping (B) from the Bank's website, and appending older (pre-1992) and newer (2020) projects to (C) – we arrive at our final data set. The data set reflects all disbursements from approximately 1999 onwards (i.e. once loans before 1992 finish disbursing), but may have gaps in repayments up to the present day.

SPEED OF NEW COMMITMENTS AND DISBURSEMENTS

In response to the Covid crisis, the World Bank pledged in February that it would deploy "up to" $160 billion in financing in the 15 months ending 30 June 2021.[6] Although the Bank did not identify the composition of this target at the time of announcement, subsequent publications and private communications with the authors indicate that the target for IDA and IBRD is $104 billion.[7] By a simple linear projection, World Bank lending commitments (i.e. new loans approved by the board) are on pace to reach that goal (Figure 1). Loan disbursements are behind. Even counting all disbursements (including loans planned and approved before the pandemic), the Bank has released $21 billion against this $104 billion pledge, putting it on track to fall short by $25 billion come June 2021 (Figure 1, top panel).

Zooming in on Africa, as of August total commitments in 2020 stood at $10 billion, and disbursements at just $6 billion (Figure 1, bottom panel). Those figures imply a total of $39 billion and $24 billion in commitments and disbursements, respectively, to African countries by June 2021 at the current pace.

But do these aggregate measures provide a meaningful assessment of the Bank's performance, and compared to what? It is difficult to judge how fast is 'fast enough', or 'as fast as possible', or whether a $104 billion target over 15 months constitutes a strong crisis response at the country level. In this section, we move beyond the headline goals the Bank has set for itself and take a closer look at these trends on a country-by-country basis. As a benchmark, we compare the rise in World Bank lending during the Covid crisis to the last global crisis of remotely equivalent scale – the 2008-9 Global Financial Crisis (GFC).

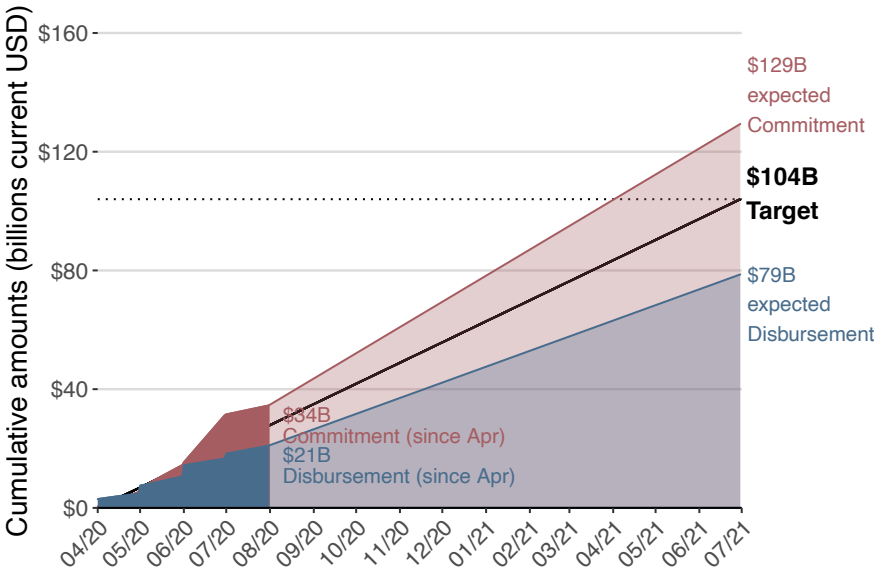
6 https://www.worldbank.org/en/news/factsheet/2020/02/11/how-the-world-bank-group-is-helping-countries-with-covid-19-coronavirus

7 An earlier version of this paper identified the IDA and IBRD target as $160 billion.

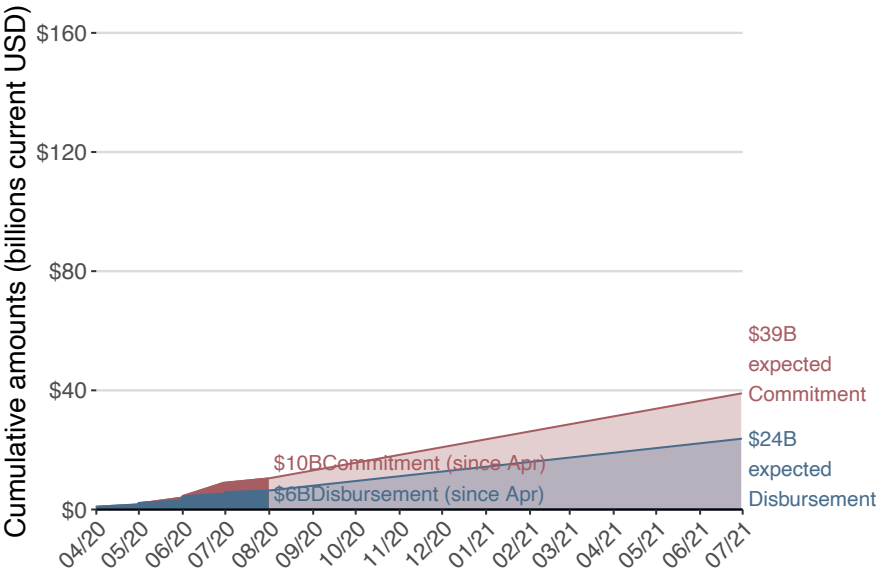
FIGURE 1 IS THE WORLD BANK ON TRACK TO MEET ITS $104 BILLION TARGET BY JUNE 2021?

Cumulative commitments and disbursements (starting 1 April 2020)

a) World



b) Africa



How does the World Bank's Covid response compare to the 2008-9 crisis?

We calculate the rate and acceleration of both commitments and disbursements in 2020 compared to earlier periods. We break up the comparison between sub-Saharan Africa and the rest of the world, and add the reference point of the year before the GFC and the year before the Covid-19 pandemic.[89]

Sub-Saharan Africa commitments have grown faster year-on-year during the coronavirus pandemic than they did during the GFC. So far, during the pandemic, commitments to Africa have grown by 114% relative to the same period in 2019 (Table 1 and Figure 2) compared to 77% growth during the GFC. Actual disbursements have grown much more slowly, but here year-on-year growth for Africa is equivalent to that of non-African countries, at 31%.

If we restrict our lens to disbursements from new loans approved since the pandemic, the World Bank's overall response to the pandemic looks sluggish compared to the GFC (up 115% compared to 174% in 2008-9). But, for Africa, the response has been quicker this time (up 65% compared to down 18% during the GFC) (Table 1).

While we cannot make a direct comparison to 2008-9, we also find that net disbursements – after subtracting repayments – increased by 74% for non-African countries during the first six months of the Covid response, and in this case non-African countries actually outstrip Africa, with 74% growth compared to 33% growth (Table 1).

8 We define the period of the coronavirus pandemic as from 1 February 2020 to 1 August 2020 (the end of when we have data available). This timing reflects the reality of the pandemic and the first official World Bank statements about an emergency Covid financing response, even though the World Bank itself often measures its response as starting in April (per Figure 1 above).

9 We define the GFC as the period between 1 November 2008 and 1 June 2010. The G20 summit meeting in November of 2008 was the first call for MDB action. At the tail end, the Leaders' statement from the June 2010 summit reads as retrospective. These dates are corroborated by our data – on a plot of total annual commitments by the year they are approved, we see a peak during this time frame (Figure 2).

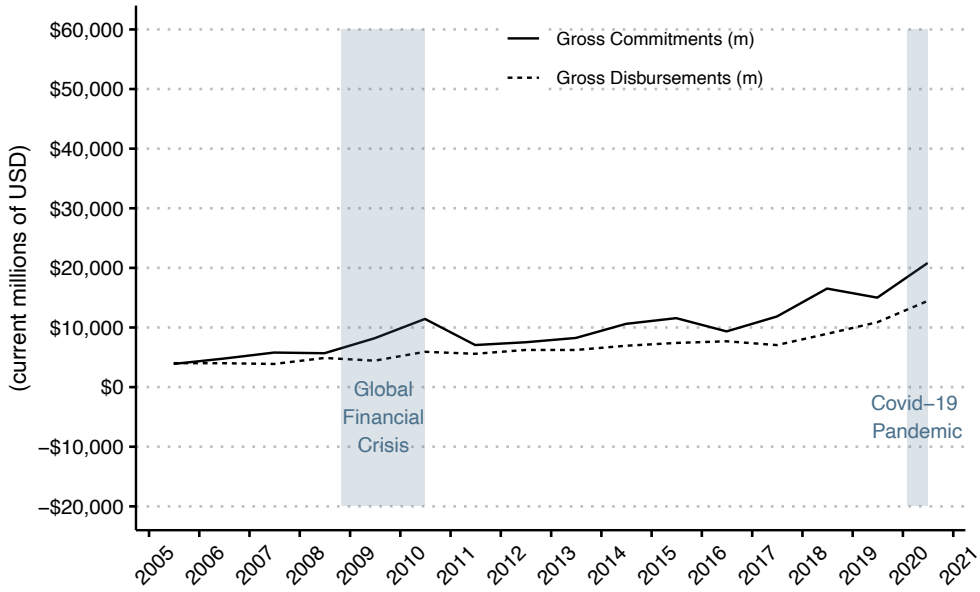
TABLE 1 SPEED OF COMMITMENT AND DISBURSEMENT TOTALS (YEAR TO DATE)

			Levels			Growth		
	Period start	Period end	SSA ($B/mo.)	ROW ($B/mo.)	Total	SSA % YoY rise	ROW % YoY rise	Total % YoY rise
Commitments								
COVID	2020-02-01	2020-08-01	2.51	5.49	8.00	114	119	118
GFC	2008-11-01	2010-06-01	0.89	4.19	5.08	77	101	96
GFC first 6 mo.	2008-11-01	2009-05-01	0.55	4.21	4.75	9	102	84
Disbursements								
COVID	2020-02-01	2020-08-01	1.37	3.00	4.37	31	31	31
GFC	2008-11-01	2010-06-01	0.46	2.73	3.18	9	89	71
GFC first 6 mo.	2008-11-01	2009-05-01	0.43	2.56	2.99	3	78	61
Disbursements of 2020 loans								
COVID	2020-02-01	2020-08-01	0.55	1.25	1.81	65	115	97
GFC	2008-11-01	2010-06-01	0.19	1.53	1.72	46	291	230
GFC first 6 mo.	2008-11-01	2009-05-01	0.11	1.07	1.18	-18	174	126
Net flows								
COVID	2020-02-01	2020-08-01	1.28	1.72	3.00	33	74	54

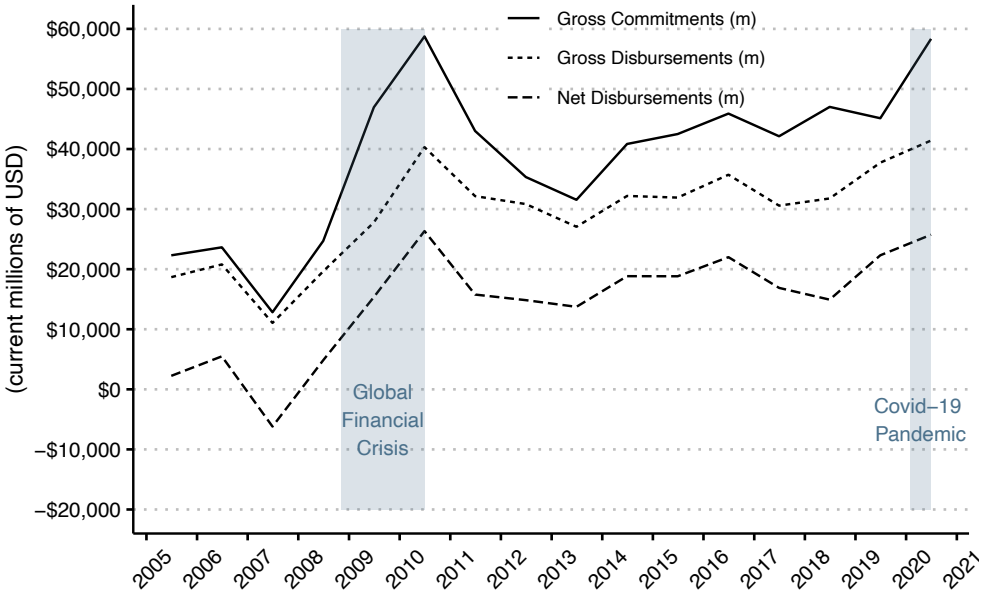
Notes: SSA = sub-Saharan Africa; ROW = rest of world. Except the former Yugoslavia, we include only disbursements to specific countries and exclude disbursements to regions of countries. Net flows from the GFC are dropped because we lack pre-1992 loans, and transactions on them. After 2011 the Snapshot data helps us fill this in.

FIGURE 2 WORLD BANK COMMITMENTS AND DISBURSEMENTS OVER TIME

a) Africa



b) World



Note: These data are taken from World Bank financial statements, based on lending over the fiscal year ending in June. Net disbursements are not reported for Africa specifically.

NET FLOWS TO SPECIFIC COUNTRIES

Commitments and disbursements are a misleading measure of the World Bank's liquidity support for developing countries during a crisis; those same countries may be simultaneously repaying earlier World Bank loans. To account for this bias, we compute net flows from the World Bank to each country, defined as disbursements net of repayments, including payments on principal, interest, and fees.

How does the World Bank response compare to the scale of countries' needs?

The scale of the Covid crisis is staggering. After decades of falling global poverty, the World Bank has forecast a reversal in 2020, with an additional 54 million people falling into extreme poverty in 2020.[10] Household surveys in the two countries with the most poor people in the world – India and Nigeria – show the depth of the economic crisis. In rural India, despite a modest recovery after lockdown, earnings remain down 44% relative to pre-pandemic levels, and unemployment stands at 40%.[11] In Nigeria, 77% of households report a shortage of food, up by 40 percentage points from the beginning of the year.[12]

While rich countries have reacted to this unanticipated economic shock with significant economic stimulus – an average of 8% of GDP in direct fiscal measures in advanced economies according to the IMF – poorer countries lack the fiscal space and short-term liquidity to do so. The IMF reports the average fiscal stimulus in low-income countries since the start of the pandemic has been just 1% of GDP.[13]

The scale of the crisis provides some context to evaluate the magnitude, and ultimately the sufficiency, of the World Bank lending response to Covid-19 to date. For comparison, we also present the increase in World Bank disbursements and the growth decline during the 2008-09 GFC. We focus just on the first six months of both crises for comparability.[14]

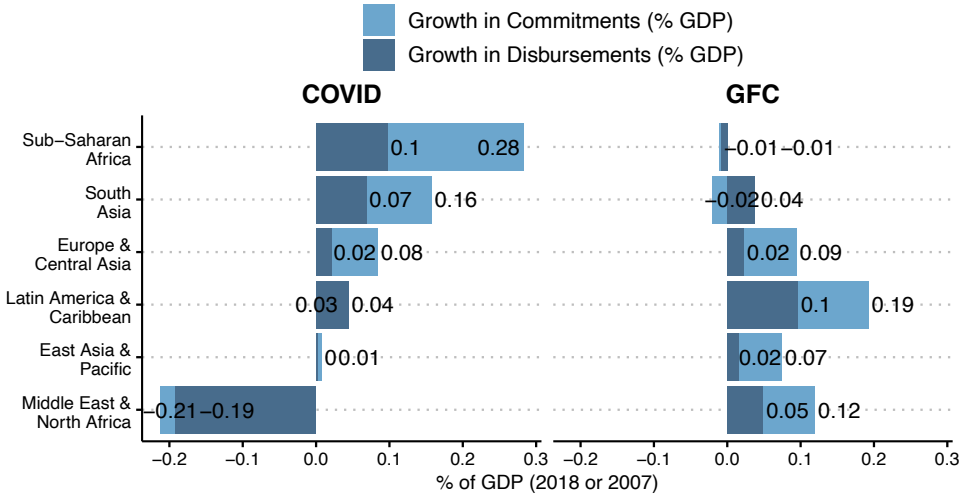
Sub-Saharan Africa has seen a faster increase in World Bank commitments and disbursements than any other region of the world during the Covid crisis. Results in Figure 5a show that new commitments increased by roughly 0.3% of GDP during the first six months of the COVID crisis, and disbursements by 0.1% of GDP.

10 https://blogs.worldbank.org/opendata/updated-estimates-impact-covid-19-global-poverty
11 https://blogs.worldbank.org/endpovertyinsouthasia/how-did-indias-rural-economy-fare-through-covid-19-lockdown-and-re-opening
12 http://documents1.worldbank.org/curated/en/558651594710025355/pdf/2nd-Round-Results.pdf
13 https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19
14 Note we rely on the 2020 World Bank income classifications during both periods, so that the set of countries is the same across crises for this comparison.

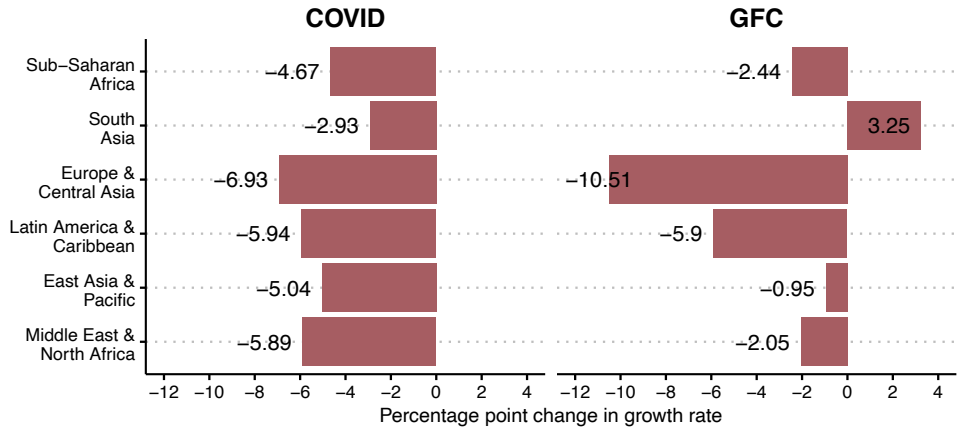
These numbers look somewhat worse given the scale of the current crisis (i.e. compared to the red bars in Figure 3b, showing the depth of the decline in forecast growth). African economies were somewhat spared by the GFC (with a 2.4 percentage point reduction in growth), but not so during this crisis (with an IMF forecast of a 4.7 percentage point decline in growth).

FIGURE 3 WORLD BANK LENDING GROWTH (YEAR-ON-YEAR DURING FIRST SIX MONTHS OF COVID, AS A PERCENTAGE OF GDP)

a) Growth in lending



b) Change in GDP growth



Note: All figures are weighted averages (by GDP) for the countries in each income group; for comparability, we use countries' World Bank region classifications and omit high income countries (based on 2020 World Bank country income classifications). Commitments and disbursements refer to totals for the first 6 months of each crisis, starting in November 2008 and February 2020, respectively. The growth decline is defined as the change in growth rates from 2008 to 2009 for the GFC and from 2019 to the (IMF's April WEO) 2020 forecast for the COVID crisis. The positive South Asian growth during the GFC is driven by Afghanistan and India. Disbursements can exceed commitments if disbursements are of old loans.

Would Africa benefit most from a World Bank debt standstill?

One point of controversy in the World Bank's response to the Covid-19 crisis has been its refusal to participate in the Debt Service Suspension Initiative (DSSI) announced by the G20 in April of 2020 and more generally to not provide debt relief to its borrowers beyond DSSI. The DSSI offers suspension of payments (both principal and interest) on loans from official bilateral creditors to 73 low-income countries.

The main reason the World Bank has offered for declining to participate, as laid out in a July note, is that doing so would endanger its own credit rating, and thus its ability to lend to low-income countries in the future.[15] The basic business model of the World Bank is to borrow at low rates, exploiting its AAA credit rating, and to lend on to (generally higher risk) developing countries at discounted rates. The Bank can do this without jeopardising its AAA rating in part because it is treated as a 'preferred creditor', putting it first in line for repayment.

The Bank's July note argues that participating in the debt service suspension could both jeopardise its AAA rating and lead to confusion about its preferred creditor treatment (if private creditors continue collecting while the World Bank does not). The consequence, the World Bank argues, is that suspending relatively modest quantities of debt service payments in the short term would jeopardise its ability to lend much greater volumes in the medium to long term. Refusing debt relief is, by the Bank's logic, in the best interest of both the Bank *and its borrowers*.

Data alone, including the transactions data we present here, cannot fully resolve the current debate about the wisdom of multilateral debt relief. But data may clarify a few of the relevant considerations.

All else equal, DSSI should be more attractive to borrowers if the following conditions hold:

1. Current debt service payments are high.
2. Expected future loan volumes from the World Bank are low.
3. A country's discount rate, defined by its own short-term cost of capital outside the MDB system (rather than the World Bank's lending rate, as often used in debt relief discussions), is high.
4. The probability of a substantial reduction in future World Bank lending due to debt relief is low.

15 http://pubdocs.worldbank.org/en/976541595021399817/DSSI-Explanatory-Note.pdf

To judge the relative magnitudes of conditions 1 and 2, we look at the size of gross disbursements and repayments in 2020 by each World Bank borrower, as shown in Figure 4, for both African countries and the rest of the world. The variance across countries is large – implying that the benefits of World Bank participation in DSSI might be as well. At one extreme, Sierra Leone has received disbursements equivalent to 3.7% of its 2018 GDP so far this year and made payments to the World Bank equivalent to 0.1% of GDP. At the other extreme, El Salvador has received no new disbursements from the World Bank and repaid 0.15% of GDP.

Combining disbursements and repayments, the vast majority of borrowers in sub-Saharan Africa are net recipients of Word Bank flows so far in 2020, as shown in Figure 5. Exceptions include South Africa, Angola, Mauritius, and Equatorial Guinea. The picture is even less uniformly positive in the Middle East and North Africa, Europe and Central Asia, and to a lesser extent Latin America.

Once again, these figures do not establish whether any of these countries would, on net, benefit from multilateral debt relief in the long term, but do highlight which countries might be relatively more attracted to such a proposal.

Note that on condition 3 in the list above, the cost of capital for IDA borrowers and even many IBRD borrowers likely exceeds Bank lending rates quite considerably. A recent review found average sovereign bond yields in sub-Saharan Africa of over 7%, for instance, compared to an IDA lending rate of less than 2%. Countries facing such high bond yields will, all else equal, benefit more from a debt standstill.

All of these considerations must be weighed against condition 4. We make no attempt to evaluate the likely magnitude (if any) of debt relief on the Bank's own cost of borrowing, although any such assessment should consider the role the institution's donors and shareholders can play in mitigating the cost.

FIGURE 4 GROSS FLOWS TO AND FROM THE WORLD BANK IN 2020 (YEAR TO DATE)

Comparing loan disbursements to all repayments on principal plus interest and fees, as % of recipient GDP

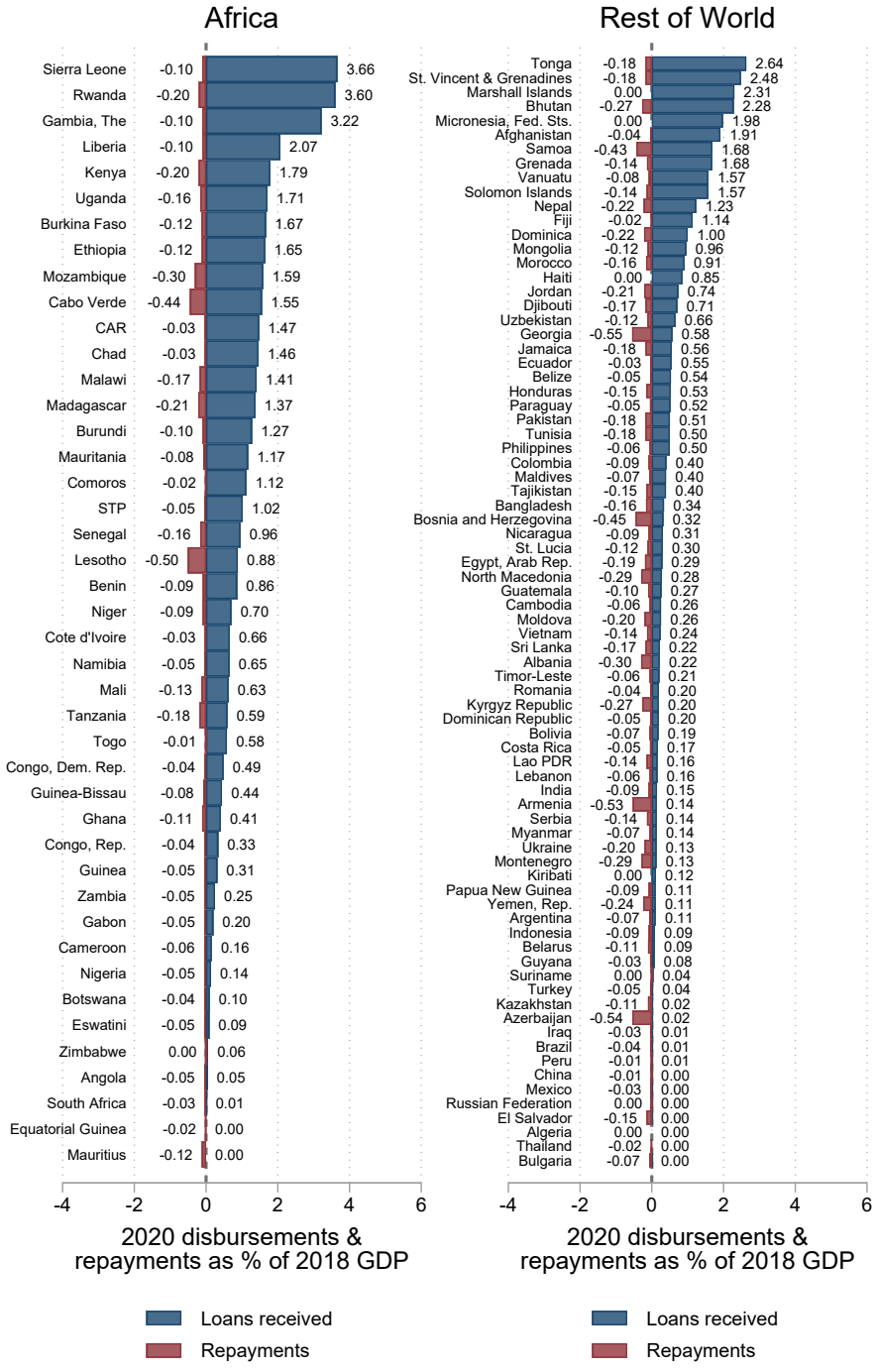
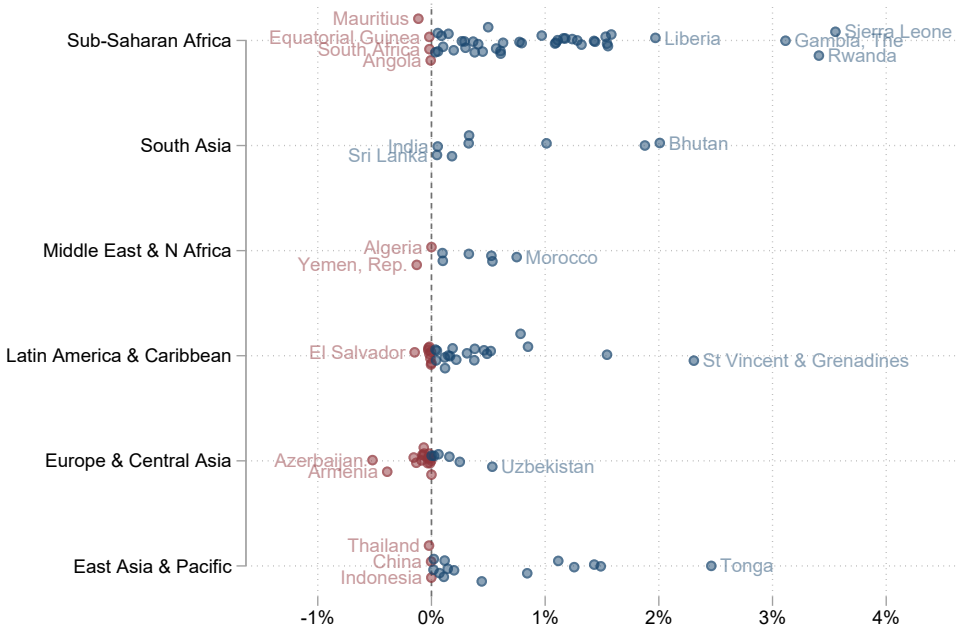


FIGURE 5 NET FLOWS FROM THE WORLD BANK IN 2020 (YEAR TO DATE)

Net flows represent the sum of disbursements and repayments, including interest and fees, as % of recipient GDP



IS FINANCE FLOWING TO THE COUNTRIES THAT NEED IT MOST?

Clearly the speed and scale of World Bank financing during the Covid crisis has varied quite a bit across countries. But so far we've said little about whether these differences follow any clear rationale. We focus here on one dimension – whether World Bank finance is flowing to the poorest countries during the crisis – while acknowledging that many other factors might influence a sensible allocation such as the size of the Covid shock in a particular country or the nation's access to other sources of finance.

Note also that IDA lending, in particular, is guided by country quotas, and year-on-year fluctuations in country allocations should smooth out, for the most part. Nevertheless, we do see some fairly large movements relative to 2019 in terms of which countries have made it to the front of the queue in 2020.

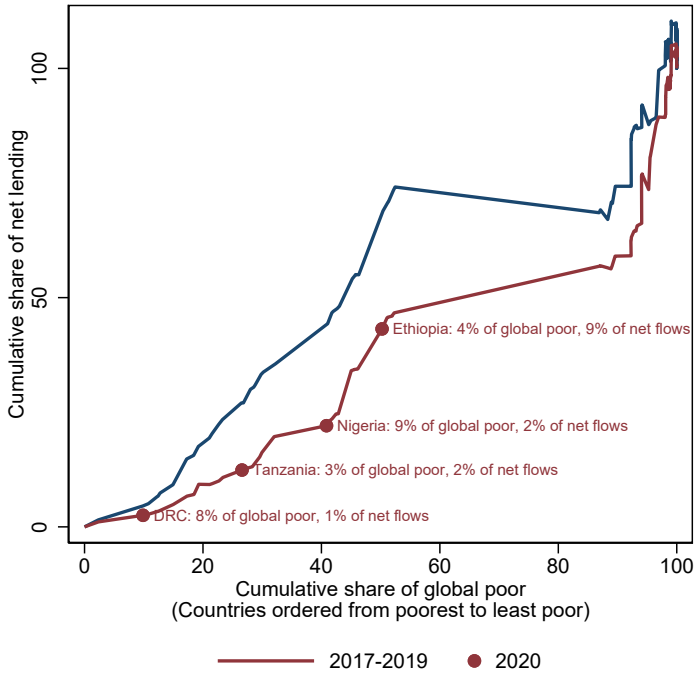
In a progressive or pro-poor allocation, the poorest countries – defined here as those with the highest poverty rate, using the World Bank's $1.90/day poverty line in purchasing power parity dollars – would receive a disproportionate share of World Bank lending. In recent years (i.e. 2017-2019) this appears to be true, just barely, as shown in Figure 6.

In 2020, the allocation of World Bank finance appears significantly less pro-poor. The horizontal axis in Figure 6 lines up all World Bank borrowers from the poorest (Madagascar) to the least poor (Lebanon). On the vertical axis, we report the share of total World Bank net lending the poorest countries receive, cumulatively. As shown, from 2017-2019 the poorest countries accounting for half of the global poor received about 75% of World Bank net lending. In 2020, that share has fallen to below half.

Some countries perennially do well. For instance, Ethiopia accounts for about 4% of the global poor and received 9% of net World Bank flows in 2020. But two large African countries do less well. The Democratic Republic of Congo and Nigeria account for 8% and 9% of the global poor, respectively, and receive just 1% and 2% of World Bank finance.

FIGURE 6 SHARE OF WORLD BANK NET FLOWS GOING TO THE POOREST COUNTRIES

Allocations above the 45-degree line are more pro-poor



This shift away from the poorest countries indicates that lending has become less targeted at poor countries both within IDA and within IBRD. In the former case, a large share of new loans has gone to the least poor IDA countries, including several in Africa. While on the IBRD side, previous lending to relatively poorer countries like Angola, Nigeria, and Uzbekistan has dried up so far in 2020.

CONCLUSION

Our analysis shows that the World Bank's response to the COVID crisis is lagging behind its own announced targets, with disbursements on pace to reach only 50% of the announced goal. Relative to the global financial crisis, performance appears more mixed – the growth in new commitments has been faster, but is much smaller relative to the depth of the crisis that the IMF has forecast for the poorest borrowers. The picture looks worse when we consider disbursements net of borrowing country repayments to the bank.

One explanation for relatively mixed performance is in the choice of financing instruments. The GFC period saw a significant increase in fast-disbursing budget support, from lows of about 30% of the portfolio before the crisis to a peak of 45% during the crisis response period. In contrast, the use of budget support this year has actually decreased compared to the pre-crisis period and is just over 30% of the portfolio. This suggests a different policy framework at work at the World Bank. Where GFC-era commitments were made with an intention to be fast disbursing, there is little evidence of this during the current crisis.

We draw a number of policy conclusions from this analysis:

1. The World Bank's client countries and its donors would be better served by timely reporting of bank commitments, disbursements, and net flows. As this chapter demonstrates, data are available to provide a monthly snapshot of bank performance, but to date, the World Bank has been unwilling to report on its performance in this manner. Timely crisis response and course corrections to the response cannot wait for a one-year lag in key performance metrics.

2. The World Bank's case for foregoing debt service suspensions may be stronger in the aggregate than on a country-by-country basis. There are a significant number of low-income countries that are not seeing an increase in support from the Bank on a net flow basis. Absent an increase in World Bank disbursements to these countries, they clearly would be better off if they did not have to repay existing bank loans during the current period. This includes some African countries, although the case for sub-saharan Africa as a whole may be weaker than for other regions.

3. It can be hard to assess why disbursements might be slower than expected and too slow to adequately respond to crisis needs. Loan conditionality can play a problematic role, though hard to measure in real time. World Bank president David Malpass has pointed to crisis lending as a useful opportunity to address structural reform issues in client countries, which suggests that the bank may be prioritising conditionality over speed of disbursement. The failure to pursue a scale up in general budget support reinforces the impression that the Bank has not prioritised speed of disbursement.

4. The overall scale of the World Bank's crisis response is failing to meet countries' financing needs. The World Bank characterises its crisis financing according to the level of committed funds. Our analysis focuses on net flows to countries as a better measure of financial support. Yet, disbursements and net flows depend directly on overall commitment levels, and it is important to question the bank's ambition when it comes to overall commitments to date. Our assessment suggests that Bank financing is neither in line with the scale of the crisis in Africa (defined by projected decline in GDPs) and nor is it reaching the poorest countries relative to the pre-crisis distribution of funds.

REFERENCES

Duggan, G, S Morris, J Sandefur, and G Yang (2020), "Is the World Bank's COVID-19 Crisis Lending Big Enough, Fast Enough? New Evidence on Loan Disbursements", Center for Global Development Working Paper 554, October.

ABOUT THE AUTHORS

Julian Duggan is a graduate student at the London School of Economics.

Scott Morris is a senior fellow at the Center for Global Development, Director of the Center's US Development Policy Initiative, and Co-Director of Sustainable Development Finance.

Justin Sandefur is a senior fellow at the Center for Global Development and Co-Director of Education Policy.

George Yang is a research assistant at the Center for Global Development.

CHAPTER 11

Chinese lending to Africa in the pandemic era

Deborah Brautigam[a] and Kevin Acker[b]

[a]Johns Hopkins University and China Africa Research Initiative (CARI); [b]CARI

INTRODUCTION

From modest beginnings in 1960, China has become one of the largest lenders in low-income sub-Saharan Africa, with official loan commitments since 2000 second only to the World Bank (Acker, 2021). African borrowers have built roads, installed electrical grids, and modernised their airports with Chinese finance. Yet, when commodity prices and growth rates began to tumble in 2015, the spectre of a new debt crisis arose. These fears expanded sharply with the impact of the Covid-19 pandemic.

Who are the Chinese lenders? What was the scope of Chinese lending in Africa[1] prior to the pandemic? How does Chinese lending compare with lending from other creditors? What is the Chinese role in Africa's debt distress, and how have Chinese lenders handled debt relief?

In this chapter we attempt to answer these questions, using data on Chinese loan commitments from the China Africa Research Initiative (CARI) at Johns Hopkins University School of Advanced International Studies (SAIS) and on outstanding debt from the World Bank's International Debt Statistics. Our analysis finds that Chinese loans play a more modest role in Africa's struggle with debt sustainability than conventional wisdom would suggest. The picture varies sharply across the subcontinent, however.

AN OVERVIEW OF CHINESE ENDING

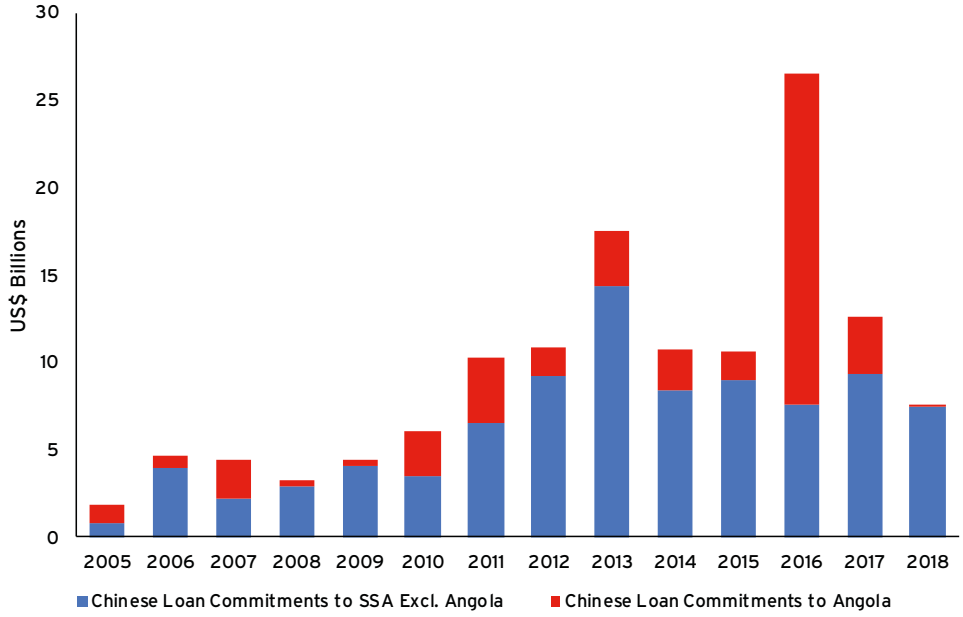
CARI data

While the World Bank collects confidential information on all members' debt positions, reported by the debtors themselves, there is no similar global repository for creditor reporting. The 37-member OECD hosts a creditor reporting system through its Development Assistance Committee (DAC), but China is not a member of the OECD, which restricts membership to democracies.[2]

1 All references to Africa in this chapter refer to sub-Saharan Africa.
2 See https://tuac.org/news/oecd-membership-and-the-values-of-the-organisation/#:~:text=Countries%20wishing%20to%20become%20OECD,transparent%20and%20free%2Dmarket%20economies

To fill the data gap, the China Africa Research Initiative has been using multilingual teams of graduate research assistants to collect, fact-check, and publish data on individual Chinese loan commitments to African governments and their state-owned enterprises. Between 2000 and 2018, we estimate that Chinese lenders signed $133 billion in loan commitments across sub-Saharan Africa. Figure 1 shows our data, with Angola separated from the other countries. Two points are important to point out: the difference between loan commitments and 'debt' and the outsized role of Angola.

FIGURE 1 CHINESE LOAN COMMITMENTS TO SUB-SAHARAN AFRICA, 2005-2018



Our data on loan commitments should not be viewed as 'debt'. Each loan takes an average of five years to disburse, and for large projects the disbursement time is longer. Some loans have already been repaid. It is not uncommon for current outstanding debt in a given country to only reach 50% of total loan commitments between 2000 and 2018.

Nigeria provides a good illustration. Between 2000 and 2018, the country signed 16 loan contracts totalling $6 billion with Chinese financiers. However, Nigeria's outstanding debt to China as of 2018 was only $2.5 billion. This is because it has repaid $660 million, while another $2.8 billion remains undisbursed. Most of the undisbursed debt is accounted for by the $2.6 billion worth of loans signed in 2017 and 2018. As each loan takes around five years to be fully disbursed, Nigeria has yet to receive most of the funds from these loans.

Second, Figure 1 separates Chinese loan commitments to Angola from the rest. With $43 billion, Angola accounts for 32% of all Chinese loan commitments to Africa. Both the volume and the modalities of Chinese lending there are quite different from most of China's other development partners on the continent. Most Chinese lending in Angola

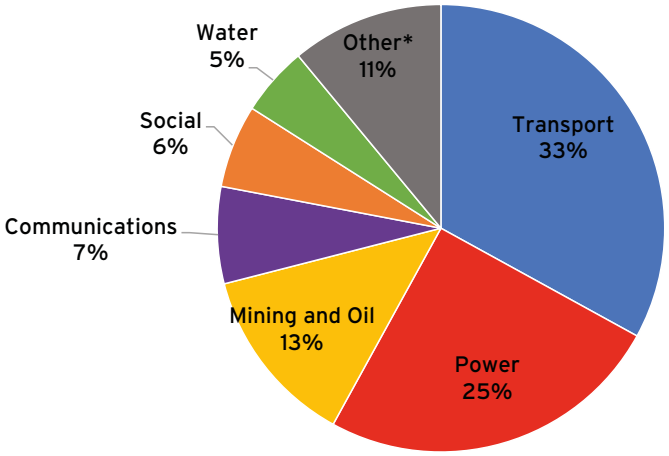
is secured by Angolan oil exports. When Angola is excluded, we find that only 5.3% of Chinese lending in Africa between 2000 and 2018 was secured by future flows of natural resources.

Project sectors financed by Chinese lending

Africa's infrastructure gap is enormous. Sixty-nine percent of Africans lack access to electricity, for example. The African Development Bank has estimated that African countries should be spending between $130 and $170 billion annually on infrastructure building and maintenance, but face a financing gap of $52 to $92 billion.

Between 2000 and 2018, Chinese loan commitments financed infrastructure (Figure 2). Nearly 70% financed just four sectors: transport (33%), electric power (25%) communications (7%) and water (5%). Nearly all of the 13% directed to the mining/oil sector consists of oil-secured commercial loans extended to support Sonangol, Angola's state-owned oil company.

FIGURE 2 CHINESE LOAN COMMITMENTS TO AFRICA BY SECTOR, 2000-2018



Note: *Other includes defence, manufacturing, and loans committed to multiple sectors.

Chinese lenders and their relationship to the Chinese government

Although the Chinese government made its first official loan to an African country (Guinea) in 1960, Chinese banks are relatively new to the continent. Table 1 provides an overview of China's main lenders, the date they provided their first loans to African governments and their state-owned enterprises, the number of loans they have committed to finance between 2000 and 2018, the gross value of these loan commitments, and the range of loan terms.

TABLE 1 CHINESE LENDING TO SUB-SAHARAN AFRICAN GOVERNMENTS AND STATE-OWNED ENTERPRISES

Chinese lender	Year lender provided first loan in Africa*	No. of loans signed, 2000-2018	Gross value of loan commitments, 2000-2018 (US$ billions)	Range of terms
Chinese government/CIDCA	1960	175	2	Interest-free
China Export Import Bank	1995	542	74	Concessional/preferential: 2% interest, 5 to 10 years grace, 20 years maturity; Commercial: LIBOR + 1% to LIBOR + 3.6% interest, 2 to 6 years grace, 12 to 20 years maturity
Supplier's credits from Chinese firms	2000	48	8	Fixed rate of 0.20% to LIBOR + 3% interest, 1 to 6 years grace, 5 to 15 years maturity
Chinese commercial banks	2001	49	10	LIBOR plus 0.30% to LIBOR + 3% interest, 2 to 5 years grace, 3 to 15 years maturity
China Development Bank	2007	144	32	LIBOR + 2.6% to LIBOR + 5%, 2 to 5 years grace, 10 to 15 years maturity
Syndicated loans involving only Chinese banks	2016	5	7	NA
Total		963	133	

*Source: SAIS-CARI database: https://chinaafricaloandata.org/

China's central government offers interest-free foreign aid loans, managed by the China International Development Cooperation Agency (CIDCA). These make up less than 5% of China's lending in Africa. China's export credit agency China Eximbank is the most important creditor in Africa, and offers a range of products, including foreign aid concessional loans, subsidised preferential export buyer's credits, special state loans, and other commercial loans. China Development Bank (CDB) is the second largest creditor, while African governments have also borrowed from nine commercial banks such as Industrial and Commercial Bank of China (ICBC), and China CITIC Bank. Finally, at least 30 Chinese companies have offered suppliers' credits (Acker et al. 2020).

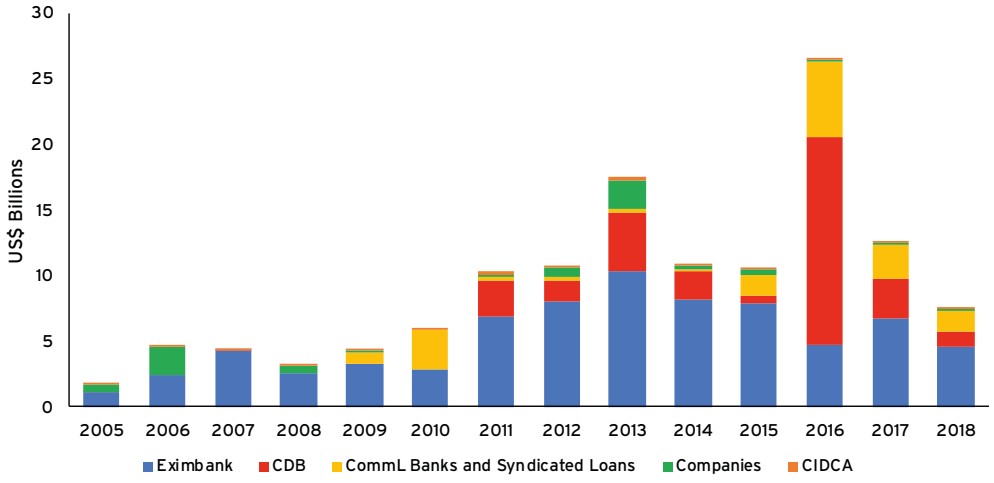
The nature of China's creditors became an issue in 2020, when the G20 countries committed to a debt service suspension initiative (DSSI) of official bilateral debt service for low-income countries and Angola. Some have contended that all state-owned lenders should be described as 'official' (Horn et al. 2019: 2). Yet this is not how the Chinese – or the Germans, or the World Bank for that matter – define official lending. The DSSI was negotiated very quickly, and some details – which would normally take months to iron out – were never finalised.

For example, the G20 agreed that commercial banks would not be included in the DSSI. Germany has interpreted the DSSI guidelines to mean that lending by its wholly state-owned commercial KfW IPEX Bank would not be included in the DSSI, and China took the same stance on China Development Bank. The World Bank's debtor reporting guidelines[3] specify that "as creditors all commercial banks are classified as private, whether publicly or privately owned". CDB was officially restructured as a state-owned commercial bank in 2008. Yet its current status is ambiguous, as the Chinese magazine *Caijing* explained.[4] When the global financial crisis hit, Beijing rolled back CDB's independence, and it is not fully market-driven. CDB maintains the same credit rating as the Chinese government, a benefit that China's commercial banks do not enjoy.

There are more than 30 Chinese lenders, only two of which are considered by Beijing to be official government lenders (China Eximbank and CIDCA). Beijing's interest-free loans managed by CIDCA provide a slightly higher rate of concessionality than the World Bank's IDA loans. China Eximbank's concessional loans and preferential export buyer's credits are slightly less concessional than the World Bank's IDA loans.

3 https://databank.worldbank.org/data/download/debt/DRS Manual 2013.pdf
4 http://finance.sina.com.cn/money/bank/bank_hydt/20150511/130922151670.shtml

FIGURE 3 LOAN COMMITMENTS BY CHINESE LENDERS, 2000-2018



Chinese commercial loans are usually provided at a variable interest rate linked to the 6-month LIBOR. The lowest margin in our data is LIBOR plus 30 basis points (0.3%) charged by the Industrial and Commercial Bank of China for a rural electrification project in Ghana. The highest margin was 450 bp for a loan from China Development Bank to Zambia.

CHINESE LENDING AND AFRICAN DEBT DISTRESS

Chinese lending took off in a period of rapid growth in Africa and, aside from Angola, peaked in 2013 (see Figure 4, which excludes Angola). In 2014, the IMF predicted that sub-Saharan Africa would continue to grow at a rate of 5.5%.[5] However, oil prices fell dramatically from $100/bbl in 2014 to only $44/bbl in 2016. Other commodities followed. In 2016, Africa's growth rate slumped to 1.4%. Yet even with the economic recession caused by Covid-19, the picture remains nuanced. Many countries are facing a liquidity crisis but not all are facing insolvency.

Chinese lending in comparative perspective

By 2017, the formerly dominant Paris Club of bilateral creditors accounted for only 5% of public and publicly guaranteed (PPG) debt across sub-Saharan Africa, while according to the World Bank, official lending from China accounted for about 17% (Brautigam et al. 2020).

In 2020, new 2019 data released by the World Bank suggest that for the 38 low-income African countries plus Angola covered by the G20 debt service moratorium, Chinese official debt came to 19% of PPG debt (Figure 5). Debt to the World Bank for these

5 https://www.imf.org/en/Publications/REO/SSA/Issues/2017/02/01/Fostering-Durable-and-Inclusive-Growth

countries accounted for 23% of PPG debt, making the World Bank the single largest official holder of African debt. Multilateral institutions hold 43% of the debt in these countries, bondholders (17%), other bilateral official lenders (10%) and non-official lenders (10%).

FIGURE 4 CHINESE LOAN COMMITMENTS TO SSA (EXCLUDING ANGOLA) AND GDP GROWTH

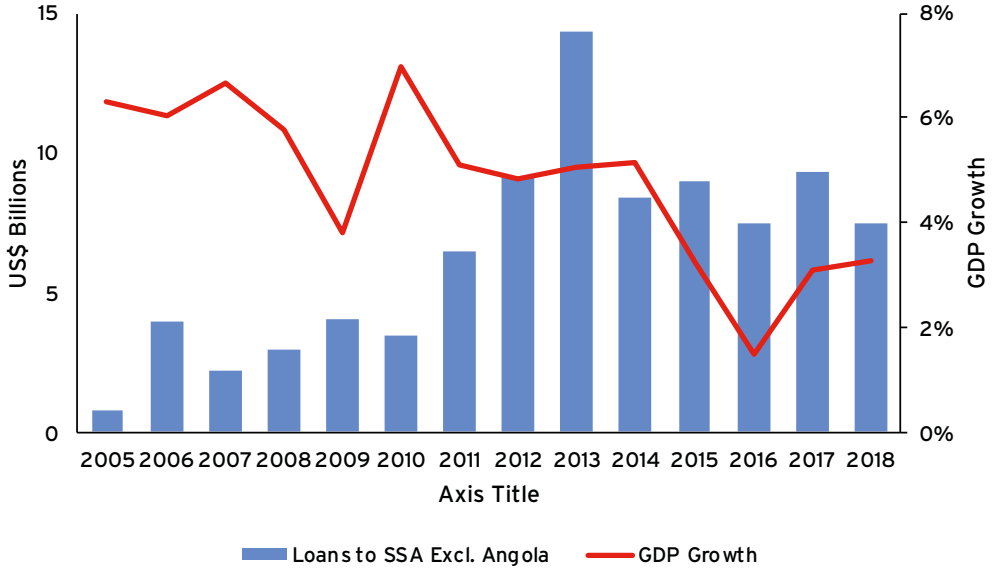
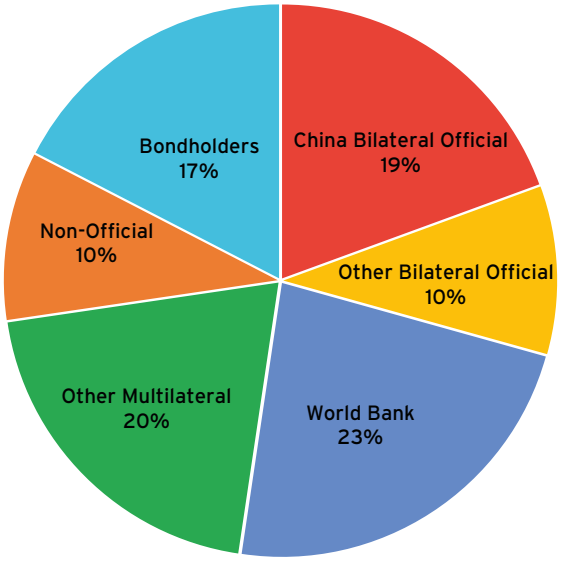


FIGURE 5 CREDITORS' DEBT STOCK IN AFRICA'S DSSI-ELIGIBLE COUNTRIES, 2019



Source: Graphic by CARI using World Bank data.

As of November 2020, 19 sub-Saharan African countries eligible for the DSSI were considered at high risk of, or already in, debt distress. In 12 of these troubled countries, World Bank data suggest that Chinese lending (official and non-official) is relatively modest, making up less than 20% of external debt stocks (Burundi 2%, Cape Verde 2%, Central African Republic 6%, Chad 7%, The Gambia 0%, Ghana 8%, Mauritania 8%, Sao Tome & Principe 4%, Sierra Leone 3%, Somalia 0%, South Sudan 13%, and Mozambique 17%). Chinese lending is over 20% of the external debt stock in just seven countries: Djibouti (55%), Angola (43%), Republic of Congo (63%), Cameroon (33%), Ethiopia (30%), Kenya (24%), and Zambia (29%).

Chinese debt relief and restructuring pre-pandemic, 2000 to 2019

When countries have trouble paying back their loans, our research shows that China typically offers debt relief, which can take a number of forms: debt write-offs, rescheduling or reprofiling, even refinancing (Brautigam et al. 2020). In 2000, China began offering write-offs of the overdue portions of the interest-free loans extended by the central government, in a process parallel to the Highly Indebted Poor Countries (HIPC) programme. These interest-free loans are funded entirely by the state budget for foreign aid and writing them off requires no new budget allocations. Funding for other loans is raised on debt markets, which means that creditors take a loss if they are not repaid.

As a result, debt restructuring is complicated, and takes different forms depending on the lender, the type of loan, the borrower, and the related project. In addition to 90 cases of HIPC-like debt cancellations, all of which were for interest-free loan debts, we identified 15 cases of debt restructuring or refinancing in ten countries in sub-Saharan Africa between 2002 and 2019 (Angola, Benin, Cameroon, Chad, Djibouti, Ethiopia, Mozambique, Niger, Republic of Congo, and Zimbabwe). We also identified one case of refinancing in this period, involving CDB loans to Angola's state-owned oil company, Sonangol.

Our research has four main findings. First, we found no central coordination of debt restructuring in Beijing – rather, Chinese lenders appear to be 'muddling through' these processes. Each bank or supplier negotiates separately with the borrowing government. Second, restructuring during this period generally happened loan by loan, or with groups of loans, rather than for the entire portfolio, following the principle that individual projects might need assistance to regain debt sustainability. Third, the most common outcome is an increase in the repayment period, or a maturity extension. Changes in interest rates are unusual and we have seen no cases of reductions in principal, although maturity extensions have led to reductions in the real present value of Chinese debt.

Finally, despite contract clauses requiring waivers of sovereign immunity from lawsuits and mandating arbitration if differences remain unresolved, Chinese lenders have so far avoided using courts to litigate or enforce payments by sovereign borrowers. Relatedly, we found no cases of "asset seizures" with Chinese lending. Chinese lenders like China Eximbank have limited leverage. Loan contracts that we have obtained generally include

a clause stating that China Eximbank may terminate disbursement on the loan if any other loans go into default (no matter the lender). We have seen this strategy used to press for payment in some countries, before the pandemic.

G20 moratorium on debt service (DSSI) and China

The Covid-19 pandemic hit African countries hard. The IMF has estimated that sub-Saharan African economies will shrink by nearly 3.2% in 2020 (IMF 2020), the worst decline on record. On 15 April 2020, the G20 countries pledged to suspend debt service on all official bilateral credits due between 1 May and 31 December 2020, in IDA-eligible low-income countries plus Angola.[6] In November 2020, the G20 moratorium was extended until 30 June 2021. The G20 initiative covered government-to-government lending, while private creditors were only "encouraged" to participate. The World Bank and other multilateral lenders declined to participate.

The G20 initiative marked the first time China had officially joined a multilateral effort on developing country debt relief. Yet while Paris Club members agreed to address countries' applications for debt relief as a group, the Chinese opted to continue to engage bilaterally. This raised questions about which Chinese creditors would participate, and for which kinds of loan instruments.

Although details on restructuring have been sparse from all lenders, not just those based in China, by now it is clear that China Eximbank has been participating in the DSSI for its government-to-government credits, including those to state-owned enterprises with sovereign guarantees. The November 2020 term sheet addendum makes clear that even debt service due to official creditors through their participation in syndicated loan arrangements is eligible for suspension as well. Not surprisingly, one area of China Eximbank lending appears to be outside the debt service suspension – credits to private borrowers that are not state-owned enterprises, even if they have sovereign guarantees.

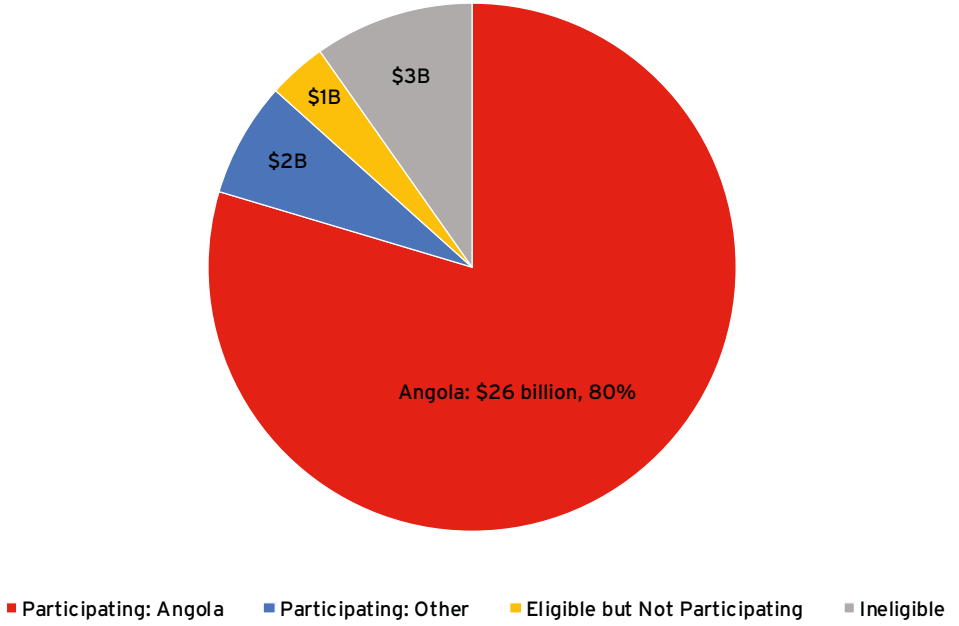
For other banks, Chinese president Xi Jinping on 17 June 2020 gave a speech at a Covid-19 event,[7] saying: "We encourage Chinese financial institutions to respond to the G-20's Debt Service Suspension Initiative (DSSI) and to hold friendly consultations with African countries according to market principles to work out arrangements for commercial loans with sovereign guarantees." This "encouragement" parallels the G20 stance. Yet in China's case, "encouragement" from China's top leader was likely to be taken seriously by Chinese commercial banks.

It is also now clear that Beijing considered all lending from China Development Bank to fall under the commercial bank category, which made its participation voluntary. This elicited surprisingly direct criticism from the World Bank. However, as far as Africa goes, the World Bank president's focus on CDB appears to be an effort to divert attention from

6 http://www.g20.utoronto.ca/2020/2020-g20-finance-0415.html
7 http://www.xinhuanet.com/english/2020-06/18/c_139147084.htm

the World Bank's own lack of participation (Brautigam 2020). Eighty percent of all CDB's government and SOE lending in Africa has gone to just one country: Angola (Figure 6). With the important exception of Angola, CDB is not a significant lender in the group of African countries that are participating in the DSSI.

FIGURE 6 CDB LOAN COMMITMENTS TO SSA COUNTRIES BY DSSI STATUS



The common framework for debt treatments

Along with extending the DSSI in November, the G20 agreed on a Common Framework for Debt Treatments beyond the DSSI.[8] Widely hailed as historic, the Common Framework for the first time brings China and other non-Paris Club official creditors into a debt relief coordination mechanism with the Paris Club. At a borrower's request, all its G20 and Paris Club creditors will now negotiate debt relief jointly. Of note is the Chinese acceptance of the IMF's analysis as the anchor for the determination of debt sustainability. Just as with the Paris Club, the Common Framework will require borrowers to seek agreements with all other official and private creditors that are "at least as favourable" as the one agreed upon through the Common Framework. As with the DSSI, the Common Framework fails to provide a clear definition of which entities are to be considered official bilateral creditors.

8 https://www.imf.org/-/media/Files/News/news-articles/english-extraordinary-g20-fmcbg-statement-november-13.ashx

CASE STUDIES OF ANGOLA AND ZAMBIA

Angola

As China's largest borrower in Africa, Angola is a unique case. Its $43 billion in loan commitments between 2000 and 2018 accounts for 32% of all Chinese loan commitments to Africa, and is 300% higher than the sum of loans committed to the next largest borrower of Chinese loans in Africa, Ethiopia ($14 billion in commitments).

Why has China lent so much to Angola? The answer lies in the match between Angola's demand for infrastructure, much of which was destroyed in the decades-long civil war, and Angola's oil production. A portion of the revenues from Angola's oil exports to China, deposited in escrow accounts, has secured much of its Chinese borrowing. Angola and its state-owned company Sonangol account for 80% of China's resource-backed loans to Africa.

This arrangement worked well while the price of oil was strong, but when the price of oil crashed in 2014 and 2015, Sonangol needed a bailout. In December 2015, CDB extended a $15 billion line of credit to Angola, $10 billion of which went to recapitalise Sonangol. Much of this was used to refinance its outstanding debt to CDB (Brautigam et al. 2020).

Just a few years later, the economic crisis induced by Covid-19 and associated drop in oil prices plunged Angola back into crisis. As part of negotiations with the IMF over an expansion to their ongoing assistance program, Angola needed to restructure its debt. With 43% of Angola's external debt owed to Chinese financiers in 2019, Angola was back at the negotiating table with its Chinese creditors.

After long negotiations, Angola reached an agreement with Eximbank for DSSI implementation, and a separate agreement with CDB that satisfied IMF requirements. Unlike the DSSI, the agreement with CDB will only suspend payments to principal rather than interest. However, the payments will be suspended for three years – a longer period than the DSSI.

Zambia

Like Angola, Zambia is also an outlier in the landscape of Chinese lending in Africa. As a frontier market, Zambia appeared to be a risky but rewarding borrower. In 2012, Zambia issued its first Eurobond, with a yield of 5.65%. Ultimately Zambia would sell $3 billion in bonds, and yields would rise to over 20%. Chinese lenders also flocked to Zambia. Between 2000 and 2019, the Zambian government and its state-owned enterprises, particularly the Zambia Electricity Supply Corporation (ZESCO) signed off on 71 separate Chinese loans from 15 different Chinese creditors, amounting to $10 billion. This is by far the largest number of Chinese creditors we have seen in any single African borrower. We argue elsewhere that Zambia is a classic 'tragedy of the commons', where centralised institutional restraints and debt management on the Zambian side were sidelined by political leaders (Brautigam forthcoming). The absence of restraints allowing multiple

Chinese lenders and contractors to 'fish' unimpeded for projects, each of which might have appeared by itself to be worthwhile and necessary but, when viewed together, were clearly unsustainable.

Zambia's poor debt management hit the headlines in November 2020 when the country defaulted on a bond payment. Three days after the bondholders refused to grant a moratorium to Zambia, citing concerns about Zambia's lack of transparency about its Chinese lending, Zambia's finance ministry announced that it had negotiated a DSSI suspension valued at $110 million with China Eximbank. (The November DSSI extension included a new clause stating that creditors cannot require payment of arrears until after the suspension period, and this appears to have solved a problem with Chinese arrears that had been stalling the negotiations). China Development Bank had earlier agreed to defer until April 2021 both interest and principle that had been due on 25 October 2020. Yet Zambian loan commitments from Chinese commercial lenders beyond CDB and China Eximbank total $3.2 billion. Debts from these additional loans will be challenging for Zambia to negotiate, as each lender will have to be approached separately.

SUMMARY

Chinese lending in Africa peaked in 2013 (aside from the special case of Angola), and has responded as expected to Africa's economic downturn. As Covid-19 continues to disrupt global travel and put downward pressure on economic expectations (see chapters in Djankov and Panizza 2020), new lending from China and disbursement on many projects in Africa slowed. This is likely to be especially true for countries participating in the DSSI, which limits non-concessional borrowing.

While the full impact of Covid-19 on China's lending to Africa will be difficult to assess until African governments release 2020 borrowing data next year, analysis of preliminary government and industry sources suggest that while the signing of new loans continued in the first quarter of 2020, new loan commitments dropped sharply after the announcement of the G20 DSSI. In fact, most reports of new Chinese loans for projects in Africa after the announcement of the DSSI involve countries that were not eligible for, or have chosen not to participate in, the DSSI, including Ghana[9] and Nigeria.[10]

Surprisingly, given the headlines on Chinese 'debt traps', we see Chinese lending playing an outsized role in debt distress in only seven African countries. Yet the pandemic has laid bare a fundamental truth about Africa's new lending landscape. Private creditors, including bondholders, now hold 43% of Africa's public and publicly guaranteed debt. With over 30 Chinese financiers operating across Africa, most as commercial lenders, negotiating debt relief has become a complicated task for some borrowers. The Paris Club,

9 https://presidency.gov.gh/index.php/briefing-room/news-style-2/1795-president-akufo-addo-commissions-3g-voice-data-site-at-atwereboana

10 https://businessday.ng/transport/article/work-set-to-start-on-multibillion-naira-kano-kaduna-rail-upgrade/

with its focus on official creditors, is not fit for this purpose. Africa's experience points to the need to revisit the idea of a multilateral Sovereign Debt Restructuring Mechanism (SDRM) that would include all types of creditors.

REFERENCES

Acker, K (2021), "Who is the Bigger Official Lender in Africa: China or the World Bank?", China in Africa: The Real Story blog, China Africa Research Initiative (forthcoming).

Acker, K, D Brautigam and Y Huang (2020), "Debt Relief with Chinese Characteristics", SAIS-CARI Working Paper 39/June.

Atkins, L, D Brautigam, Y Chen, and J Hwang (2017), "Challenges of and opportunities from the commodity price slump", CARI Economic Bulletin No. 1.

Brautigam, D (2020), "Zambia's Chinese Tragedy of the Commons", SAIS-CARI Working Paper (forthcoming).

Brautigam, D (2020), "China, the World Bank, and African Debt: A War of Words", *The Diplomat*, 17 August.

Brautigam, D, Y Huang, and K Acker (2020), "Risky Business: New Data on Chinese Loans and Africa's Debt Problem," SAIS-CARI Briefing Paper No. 3, July.

Djankov, S and U Panizza (2020), *Covid-19 in Developing Economies*, CEPR Press.

Horn, S, C Reinhart and C Trebesch (2019), "China's Overseas Lending" NBER Working Paper 26050.

IMF (2020), "Regional Economic Outlook for Sub-Saharan Africa, June 2020 Update".

Morris, S, B Parks and A Gardner (2020), "Chinese and World Bank Lending Terms: A Systematic Comparison Across 157 Countries and 15 Years", Center for Global Development, 2 April.

ABOUT THE AUTHORS

Deborah Brautigam is the Bernard L. Schwartz Professor of International Political Economy at Johns Hopkins University School of Advanced International Studies (SAIS) and Director of the China Africa Research Initiative (CARI).

Kevin Acker is the Research Manager at the China Africa Research Initiative (CARI).

CHAPTER 12

Debt risks in sub-Saharan Africa and beyond[1]

Patrick Bolton,[a] Mitu Gulati,[b] and Ugo Panizza[c]

[a]Columbia University and CEPR; [b]Duke University; [c]Graduate Institute, Geneva and CEPR

INTRODUCTION

Even before the Covid-19 pandemic, many countries in sub-Saharan Africa were at high risk of economic and financial distress. The collapse in economic activity brought about by the pandemic and the need to redirect money that had been earmarked for other government expenditures, including external debt service, to defray Covid-related expenses has increased the number of countries likely to face debt crises in the coming months.

A key official sector response to this situation was the Debt Service Suspension Initiative (DSSI), originally proposed by the president of the World Bank and the managing director of the IMF in March 2020 and adopted by the G20 on 15 April. The objective of the initiative was to give 73 low-income countries a debt holiday for the rest of 2020 and hope – via exhortation – that the private sector would voluntarily follow suit in providing equivalent relief. As of 10 January 2021, 45 countries have applied for relief under the DSSI and no private sector relief has been provided.

The sudden stop in capital flows to emerging and developing countries that followed the eruption of the pandemic was temporary. Thanks to infusions of money by central banks in advanced economies, capital began to flow back to some developing countries. Financial markets, however, are fickle and a tightening of financial conditions could lead to a situation comparable to the Latin American debt crisis of the 1980s. The costs of not having mechanisms in place to deal with such an event are potentially catastrophic.

After describing the effect of the Covid-19 pandemic on debt sustainability in Sub-Saharan Africa, this chapter defines some options for providing temporary legal protection to debtor countries in the event of a global debt crisis.

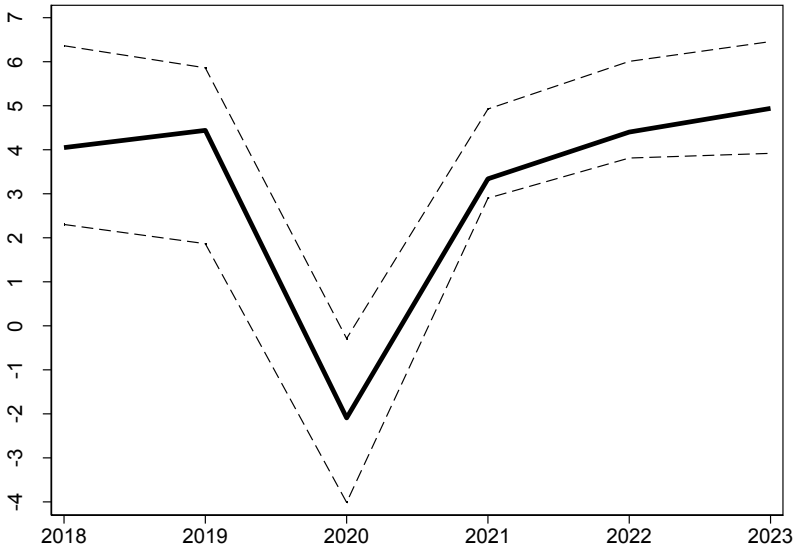
1 This chapter draws on Bolton et al. (2020) and on Bolton et al. (2020b) and Bolton et al. (2020d).

DEBT VULNERABILITIES BEFORE AND AFTER COVID-19

In February 2020, the IMF released a report on the evolution of public debt vulnerabilities in low-income countries (IMF 2020a). In 2013, less than a quarter of surveyed countries, most of them in sub-Saharan Africa, were either in debt distress or at high risk of debt distress, with the remaining countries deemed to be at moderate or at low risk of debt distress (43% and 34% of the total, respectively). The debt sustainability analysis exercise conducted by the IMF and World Bank in 2019 (before the explosion of Covid-19) classified 51% of covered countries as being either in debt distress or at high risk of debt distress. A further 30% were classified as being at moderate risk of debt distress and only 19% were deemed to be at low risk of debt distress.

This was a bleak picture pre-pandemic; the pandemic is making things worse. According to IMF estimates, in 2020 GDP in the median African country contracted by about 2% (a 4% contraction in the country in the 25th percentile of the distribution) – six percentage points below 2019 growth (Figure 1). The IMF forecasts that it will take at least three years to return to 4% growth and many more years to recover the output lost over 2020-2023. Moreover, the pandemic is likely to increase the already large informal sector of the economy that characterizes many sub-Saharan African countries (Daniel et al. 2020). A large informal economy will both complicate the implementation of Covid-19 containment measures and reduce the ability to raise government revenues to implement such policies.

FIGURE 1 GDP GROWTH IN SUB-SAHARAN AFRICA

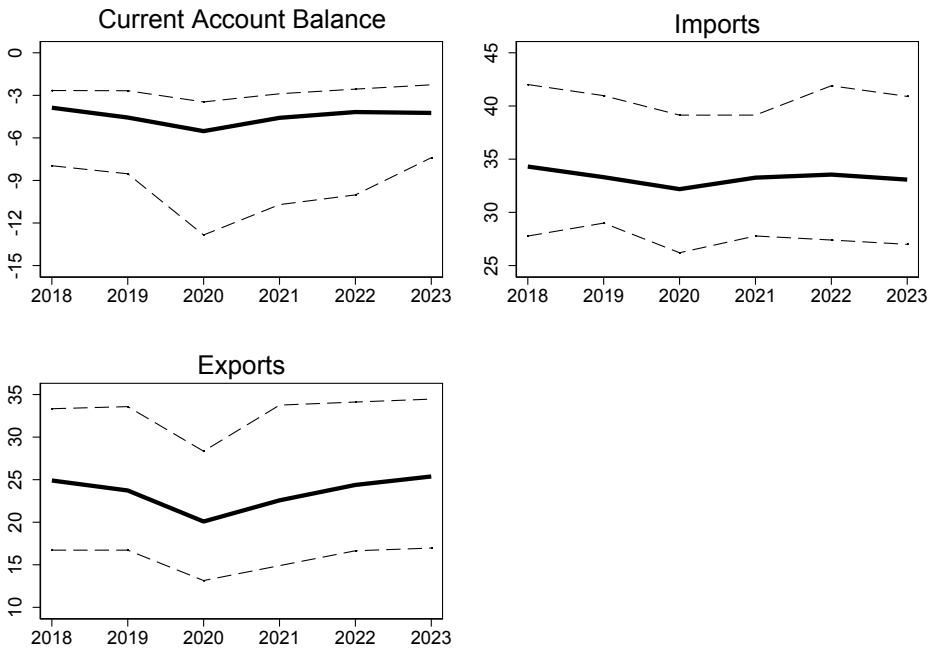


Note: The solid line plots median GDP growth and the dashed lines the interquartile range for a sample of 48 sub-Saharan Africa countries.

Source: Own elaborations based on IMF WEO forecasts.

Countries in sub-Saharan Africa will also need to finance larger current account deficits (a one percentage point deterioration for the median country; see Figure 2). These financing needs are not driven by an increase in imports, which would be optimal from a consumption smoothing perspective. Instead, they are due to a contraction in imports of about one percentage point and a larger (about three percentage point) contraction in exports.

FIGURE 2 EVOLUTION OF THE CURRENT ACCOUNT AND ITS MAIN COMPONENTS



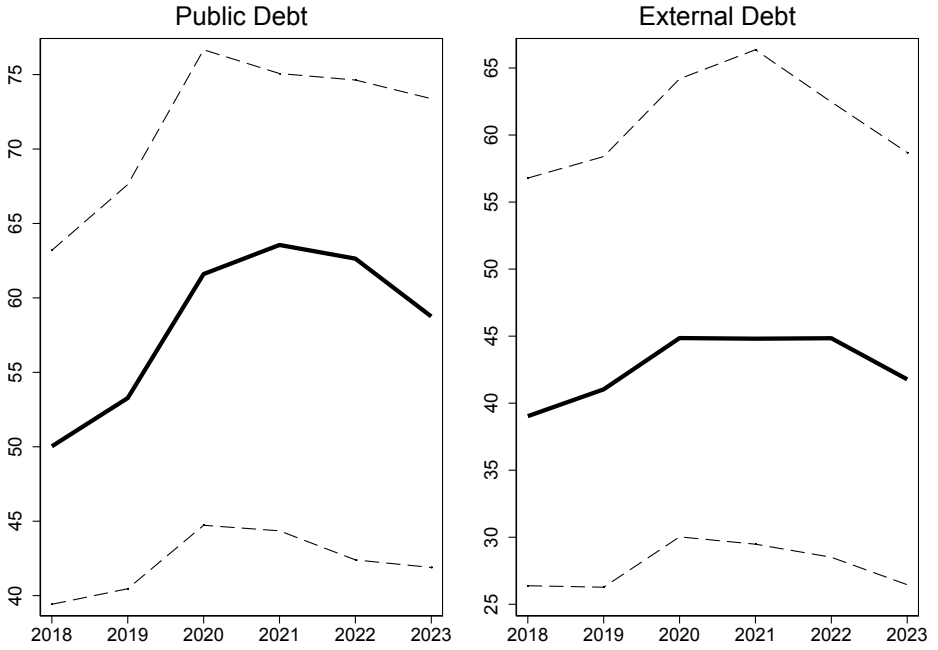
Note: The solid lines plot the median current account, imports, and export as a percentage of GDP and the dashed lines the interquartile ranges for a sample of 48 sub-Saharan Africa countries.

Source: Own elaborations based on IMF WEO forecasts.

Debt ratios are expected to increase substantially, with most of the increase in debt associated with the issuance of domestic debt (Figure 3). While domestic debt financing can reduce vulnerabilities associated with currency mismatches (Eichengreen et al. 2005), it does not allow for risk sharing and may have negative implications in terms of future inflation and financial repression. In fact, the limited increase in foreign borrowing is likely to be due to a lack of access to the international capital market, even under the current favourable financial conditions. While the sudden stop of March 2020 was short-lived and by the summer capital flows to emerging and developing countries reached record levels (Esteves and Sussman 2020), not all countries benefited from the expansionary policies implemented by most advanced economies. While more than two-thirds of middle-income emerging market countries that lost market access in March

regained access in June, the number of low-income countries that regained market access was much smaller. And that latter category includes most of the nations in sub-Saharan Africa.

FIGURE 3 TOTAL PUBLIC DEBT AND EXTERNAL DEBT



Note: The solid lines plot the median public and external debt as a percentage of GDP and the dashed lines the interquartile ranges for a sample of 48 sub-Saharan Africa countries.

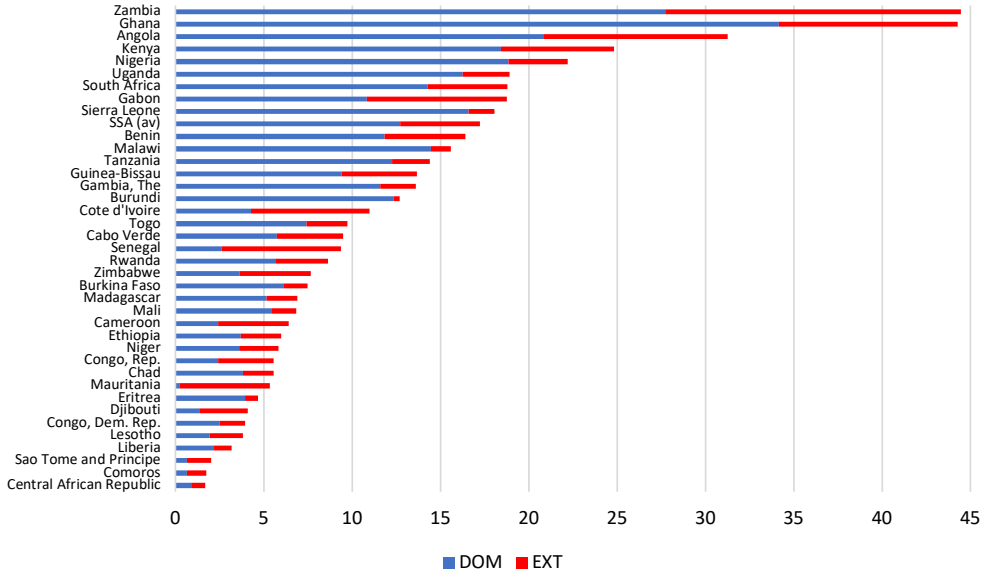
Source: Own elaborations based on IMF WEO forecasts.

Even without considering rollover needs, staying current on interest obligations on the existing stock of debt could be a challenge for many countries in sub-Saharan Africa. The top panel of Figure 4 shows that in nearly half of the countries for which we have data, interest payments will absorb more than 10% of government revenues in 2021. This share is well above 20% in Nigeria, Kenya, Angola, Ghana and, Zambia (the latter defaulted on its debt in November 2020).

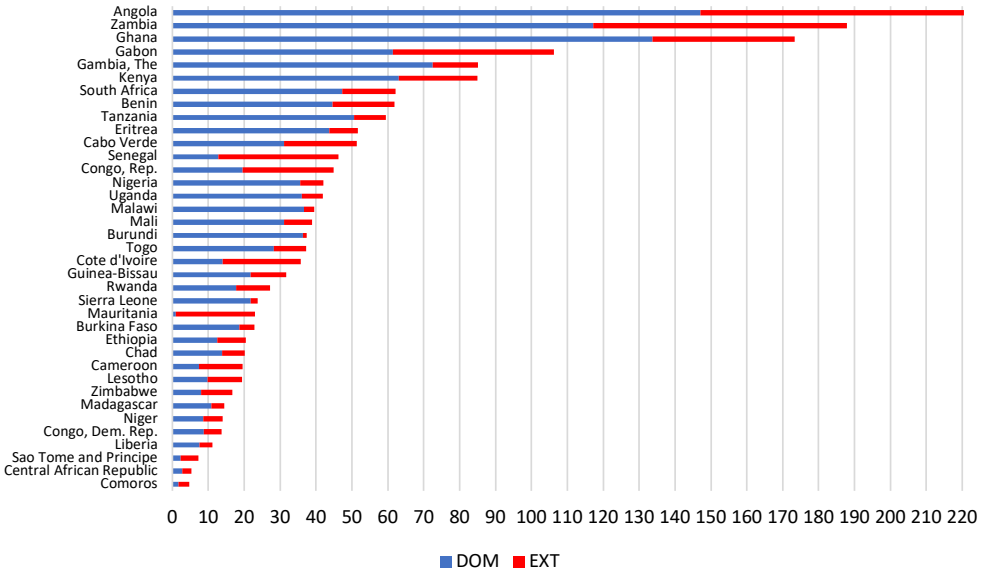
The situation looks worse if we compare interest payments with government health expenditure. There are four countries – Angola, Zambia, Ghana, and Gabon – for which interest payments are well above 100% of health expenditure and 21 countries for which interest payments are more than one-third of health expenditure.

FIGURE 4 INTEREST PAYMENT ON DOMESTIC AND EXTERNAL PUBLIC DEBT, 2021

a) Percentage of government revenues



b) Percentage of health expenditure

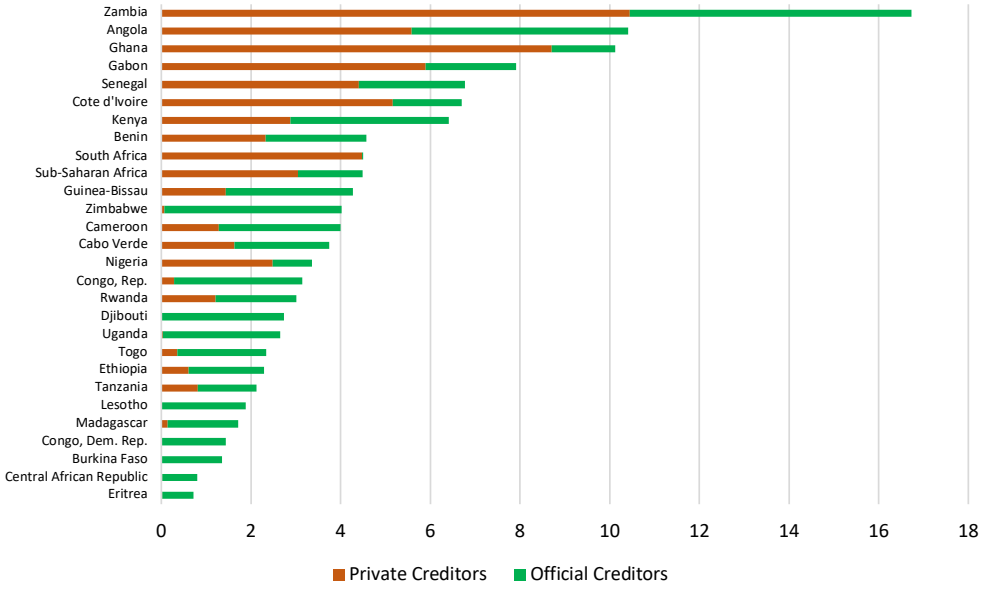


Note: Health expenditure figures are for 2017.

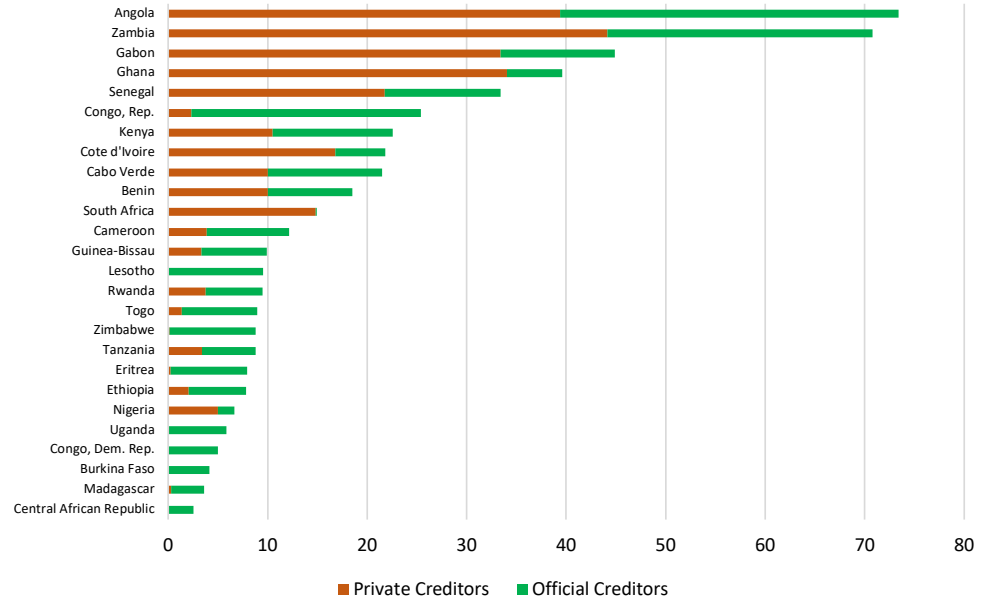
Source: Own elaboration based on IMF and World Bank data.

FIGURE 5 INTEREST PAYMENT ON EXTERNAL PUBLIC DEBT, 2021

a) Percentage of government revenues



b) Percentage of health expenditure



Note: Health expenditure figures are for 2017.

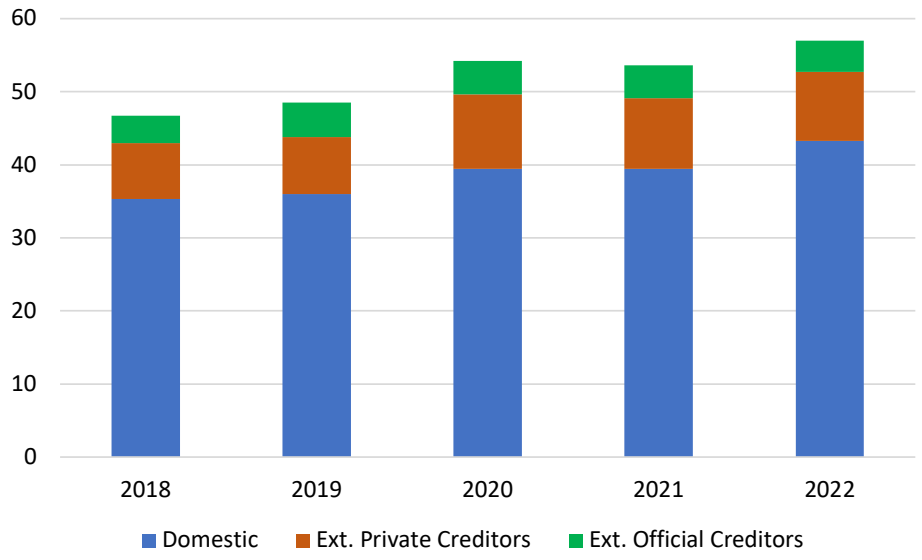
Source: Own elaboration based on IMF and World Bank data.

Figure 5 focuses on public external debt. While the majority of countries in sub-Sharan Africa mostly borrow from official creditors (both bilateral and multilateral), there are at least ten countries in which interest owed to external private creditors amounts to more than 10% of health expenditure, and four countries (Angola, Gabon, Ghana, and Zambia) for which these interest obligations account for more than one-third of public sector health expenditure.

Figure 6 plots the evolution of interest payments as a share of health expenditure for the whole subcontinent. They show that these payments grew rapidly in 2020 and are expected to remain high in 2021-22, with payments to external private creditors representing about 10% of health expenditure for the continent as a whole.

FIGURE 6 INTEREST PAYMENTS ON DOMESTIC AND EXTERNAL PUBLIC DEBT AS A % OF HEALTH EXPENDITURE

(sub-Saharan Africa, weighted average)



Note: Health expenditure figures are for 2017.

Source: Own elaboration based on IMF and World Bank data.

POLICY RESPONSES

Since early 2020, more than 100 countries have applied for IMF financial assistance to deal with the pandemic. Realising that, in addition to emergency financing from official sources, countries may need to suspend debt service payments for a temporary period in order to redeploy those funds for Covid-related expenses, on 25 March 2020 the president of the World Bank and the managing director of the IMF called on official bilateral creditors to suspend debt payments from a group of low-income countries. The

initial response of the private sector to this call to action was encouraging. On 9 April, the Institute for International Finance (IIF) wrote an open letter suggesting that both bilateral and commercial creditors should commit to "forbear payment default" until the end of 2020 for the poorest countries affected by the pandemic.

On 15 April 2020, the G20 issued a communiqué supporting a Debt Service Suspension Initiative aimed at allowing for a suspension of debt service payments to official bilateral creditors for the poorest countries that request such forbearance. The G20 called upon private creditors, working through the IIF, to participate in the Initiative on comparable terms. At about the same time, Bolton et al. (2020a, 2020b) put forward a plan which would provide the right incentives, in terms of sticks and carrots, for private sector participation in the initiative.

On 1 May, the IIF responded to the G20 call with a second letter which mentioned a "complex landscape" and several obstacles to private sector participation to the DSSI (see Bolton et al. 2020c for a timeline of events).

In mid-May, Paris Club creditor countries started signing Memoranda of Understanding implementing the DSSI with participating IDA countries. These MOU require the beneficiary countries to commit to seek from all other bilateral creditors a debt service treatment that is "in line with" the terms set out in the MOU. No mention was made of private creditors.

On October 2020, the G20 agreed to extend debt suspension by six months until June 2021 and agreed to examine the need for a further extension before the 2021 Spring Meetings of the IMF and the World Bank. The G20 also proposed a Common Framework for debt restructuring with the aim of achieving comparable treatment of all official bilateral creditors, including those that are not part of the Paris Club, and including the private sector. The Common Framework states that:

> The key parameters will be established so as to ensure fair burden sharing among all official bilateral creditors, and debt treatment by private creditors at least as favourable as that provided by official bilateral creditors.[2]

We are unsure as to how this comparability of treatment goal will be implemented; best we can tell, there appears no mechanism to enable that as yet. But we put that rather large fly in the buttermilk aside for now. More concretely, as of this writing, 45 out of the 73 eligible countries have applied for debt service suspension, and the private sector has not participated. The most recent estimations suggest that the DSSI delivered $9.5 billion of debt relief (if all eligible countries had applied, total debt relief would have been close to $12 billion; see Table 1 in the Appendix).

2 https://www.imf.org/-/media/Files/News/news-articles/english-extraordinary-g20-fmcbg-statement-november-13.ashx

Some countries did not apply for debt suspension because they were afraid that participating in the initiative would have a negative effect on their reputation on the international capital markets. Recent research from the IMF, however, shows little evidence for such a negative reputational effect (Lang et al. 2020).

PREPARING FOR A WAVE OF DEFAULTS

The debt situation of many countries in sub-Saharan Africa has deteriorated dramatically and some of these countries have been able to avoid a full-fledged debt crisis only because of abundant global liquidity. But things can change. A turn of market sentiments could lead to a sudden stop in capital flows that, in turn, would trigger an international financial and humanitarian crisis.

Over the past decades there has been progress in the design of instruments to deal with sovereign debt crises. However, the current design of the international financial architecture is not well equipped to deal with a situation in which a large number of countries default at the same time as a result of an exogenous shock. If all creditors could be coordinated, they would presumably agree that they would benefit from a standstill that allows the affected sovereigns to use their scarce resources to fight the pandemic and get their economies back on track. At the centre of such a coordination mechanism would be a stay on creditor litigation, so that the crisis countries can undertake an orderly debt work-out. This is akin to the debtor-in-possession regime under US corporate bankruptcy.

However, no fast and efficient mechanism exists to provide a multi-country stay. The recent G20 Common Framework is a step in the right direction, with its aim of comparable of treatment of Paris-Club and non-Paris Club creditors somewhat allaying concerns that large creditors that do not belong to the Paris Club (such as China and its various state-owned enterprises) would seek better restructuring terms. However, there are at least two problems with the Common Framework.

First, the framework appears to be limited to DSSI-eligible countries, and we suspect that several non DSSI-eligible countries are already in, or on the brink of, debt trouble.

Second, while explicitly mentioning private sector participation, the framework does not detail concrete measures that could induce the private sector to participate in the Initiative. Specifically, countries that request a suspension of official debt service are required to ask for similar treatment from the private sector, but that does not preclude

some private creditors choosing not to get involved and suing debtor countries in default. The Common Framework does not include any legal mechanism that would prevent such suits.[3]

In the absence of such a legal mechanism, countries that want to divert resources from debt service to pandemic-related expenditures risk having to fight a plethora of creditor lawsuits while approaching their creditors for a bespoke debt restructuring. As this requires time and resources – neither of which is in abundant supply – it would be desirable if countries could be temporarily protected against lawsuits. This is the notion of 'legal air cover' that we describe in detail in Bolton et al. (2020d).

We start with the 'reverse acceleration' mechanism built into existing contracts. This provision allows for a simple majority of creditors to reverse attempts by a minority of creditors to accelerate the debt. However, there are several features that make this mechanism unsuitable for dealing with a multi-sovereign default scenario. It is thus unlikely that existing contract mechanisms can produce an immediate and effective stay on litigation in a generalised sudden stop scenario.

Next, we focus on three options which can be put in place quickly, without the need for lengthy legislative wrangling or contract-by-contract and country-by-country negotiations. The air cover they provide may facilitate negotiations with creditors and buy time for conducting debt sustainability analyses, without the fear of a rush to the courthouse. In this sense, the solutions that we propose can be useful to deal with both liquidity and solvency crises in a world that still lacks a statutory mechanism for dealing with sovereign defaults.[4]

The first plausible option is a UN Security Council Immunity Shield similar to that used to restructure the Iraqi debt accumulated by Saddam Hussein. The second option is an executive order by the US president and a similar legislative action by the UK parliament (most international debt is issued under either New York law or UK law). The third option would instead require using the doctrine of Necessity under Article 25 of the International Law Commission's Articles on Responsibility of States for Internationally Wrongful Acts.

There are also challenges related to using these three options. A key challenge has to do with the fact that these options envision a degree of ex-post state intervention in the debt contracts. Under normal circumstances, retroactive modifications of contract terms are

3 Another unresolved issue that goes beyond the objective of this chapter relates to access to financial resources after debt relief is granted. The HIPC and MDRI initiatives came with limits to new borrowing aimed at maintaining debt sustainability in the long run. According to some commentators such debt ceilings were counterproductive because they prevented countries from accumulating much needed human and physical capital. According to others, debt limits by multilateral and Paris Club creditors led to free riding by non-Paris Club official creditors. It remains to be seen if the Common Framework will be able to guarantee continuous access to financing, while preventing free riding by certain groups of creditors.

4 A discussion of the literature on different approaches to sovereign debt restructuring is beyond the scope of this chapter. For a review of recent developments in sovereign debt resolution tools, see IMF (2020b); for a discussion of the trade-offs involved in the creation of a statutory mechanism versus allowing matters to be governed by contract, see Bolton and Skeel (2004) Buchheit et al. (2013), and Panizza (2013).

disfavoured in every modern legal system because they diminish the value of contractual commitments. Ex-post interference with contract terms can, however, be optimal in exceptional circumstances where the parties themselves – had they been able to negotiate a contract provision ex-ante – would have wanted modifications to the contract. Under these circumstances, ex-post intervention in contracts by the state can be welfare enhancing. For instance, Kroszner (1998) shows that the US government's abrogation of gold clauses in the 1930s in the context of the Great Depression did not lead to negative market reactions or spillovers to other asset classes.

The most important recent ex-post contract modification was the Greek government's decision to retroactively insert collective action clauses in all of its local law-governed sovereign bonds. Multiple challenges were brought against the Greek sovereign across a range of international fora with expropriation-type claims being made in each case. In all of these challenges, the courts sided with Greece.

Several observers have suggested that this 'Greek retrofit' would reduce faith in the value of contracts across the EU, and therefore increase the costs of borrowing for sovereigns in the European periphery. In Bolton et al. (2020d), we analyse the validity of these claims by conducting a series of event studies aimed at testing whether the court decisions mentioned above had an effect on the borrowing costs of Ireland, Italy, Portugal, and Spain. We find no evidence of a systematic increase in borrowing costs for other vulnerable European sovereigns as a result of the various tribunals upholding the Greek ex-post modification of contract terms. This result supports the idea that, when justified by exceptional events, ex-post contract modifications do not necessarily have negative repercussions.

CONCLUSIONS

Many countries in sub-Saharan Africa were at risk of debt distress before the explosion of the Covid-19 pandemic, and things are now much worse. So far, a generalised debt crisis has been avoided thanks to exceptionally favourable financial conditions. However, markets are fickle and another sudden stop in the near future cannot be ruled out. When it happens, it will likely lead to a generalised debt crisis.

In this chapter we describe some options for providing temporary legal protection to debtor countries in the event of a global debt crisis. We also point to empirical evidence suggesting that it is unlikely that the actions that we describe – if implemented with care – would have significant negative repercussion on the functioning of the global debt market. On the contrary, by helping overcome a severe debt-overhang problem, these measures would allow all sides – debtor and creditors – to benefit from avoiding a messy and protracted debt crisis.

REFERENCES

Bolton, P and D Skeel (2004), "Inside the Black Box: How Should a Sovereign Bankruptcy Framework Be Structured?", *Emory Law Journal* 53: 763-822.

Bolton, P, L Buchheit, P-O Gourinchas, M Gulati, C-T Hsieh, U Panizza and B Weder di Mauro (2020a), "Born Out of Necessity: A Debt Standstill for Covid-19", CEPR Policy Insight no. 103.

Bolton, P, L Buchheit, P-O Gourinchas, M Gulati, C-T Hsieh, U Panizza and B Weder di Mauro (2020b), "A debt standstill for developing and emerging market countries", in S Djiankov and Ugo Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

Bolton, P, L Buchheit, P-O Gourinchas, M Gulati, C-T Hsieh, U Panizza and B Weder di Mauro (2020c), "Sovereign debt standstills: An update", VoxEU.org, May.

Bolton, P, M Gulati and U Panizza (2020d), "Legal Air Cover", CEPR Discussion Paper 15336.

Buchheit, L, B Weder di Mauro, A Gelpern, M Gulati, U Panizza and J Zettelmeyer (2013) "Revisiting sovereign bankruptcy", Committee for International Economic Policy Reform, Brookings Institution.

Daniel, E, M Danquah, C Sacchetto, and H Telli (2020), "Informality and Covid-19 in sub-Saharan Africa", International Growth Centre Policy Brief.

Eichengreen, B, R Hausmann, and U Panizza (2005), "The Pain of Original Sin", in B Eichengreen and R Hausmann (eds), Other People's Money, Chicago University Press.

Esteves, R and N Sussman (2020), "Corona Spreads", mimeo, Graduate Institute, Geneva.

IMF (2020a) "The Evolution of Public Debt Vulnerabilities In Lower Income Economies", IMF Policy Paper 20/003.

IMF (2020b), "The International Architecture for Resolving Sovereign Debt Involving Private-Sector Creditors, Recent Developments, Challenges, and Reform Options", IMF Policy Paper 2020/043.

Kroszner, R (1998), "Is it Better to Forgive Than Receive? Repudiation of the Gold Indexation Clause in Long-Term Debt During the Great Depression", CRSP Working Paper 481.

Lang V, D Mihalyi and AF Presbitero (2020), "Debt Relief, Liquidity Provision, and Sovereign Bond Spreads".

Panizza, U (2013), "Do We Need a Mechanism for Solving Sovereign Debt Crises? A Rule-Based Discussion", IHEID Working Paper 03-2013, The Graduate Institute, Geneva.

ABOUT THE AUTHORS

Patrick Bolton is the Barbara and David Zalaznick Professor of Business at Columbia University.

Mitu Gulati is a Professor at Duke Law School, Duke University.

Ugo Panizza is Professor of International Economics and Pictet Chair in Finance and Development at the Graduate Institute of International and Development Studies. He is Vice President and Fellow of CEPR.

APPENDIX

TABLE 1 DSSI: ELIGIBLE COUNTRIES AND POTENTIAL SAVINGS IN DECEMBER 2020

	Applied	Risk of debt distress		Potential DSSI Savings	
		External	Overall	% GDP	Mill $
Afghanistan	Yes	High	High	0.2	39.3
Angola	Yes	N/A	N/A	2	1,782.9
Bangladesh	No	Low	Low	0.1	331.9
Benin	No	Moderate	Moderate	0.1	16.1
Bhutan	No	Moderate	N/A	5.8	144.5
Burkina Faso	Yes	Moderate	Moderate	0.2	25.9
Burundi	Yes	High	N/A	0.1	4.5
Cabo Verde	Yes	High	High	0.9	18
Cambodia	No	Low	Low	0.8	220
Cameroon	Yes	High	High	0.9	337.3
Central African Republic	Yes	High	High	0.3	7.4
Chad	Yes	High	High	0.6	65.4
Comoros	Yes	Moderate	Moderate	0.2	2.3
Congo, Dem. Rep.	Yes	Moderate	Moderate	0.3	156.3
Congo, Rep.	Yes	In distress	In distress	1.4	181.8
Côte d'Ivoire	Yes	Moderate	Moderate	0.4	225.3
Djibouti	Yes	High	High	1.7	56.8
Dominica	Yes	High	N/A	0.7	4.3
Ethiopia	Yes	High	High	0.5	472.9
Fiji	Yes	N/A	N/A	0.2	13.4
Gambia, The	Yes	High	High	0.6	10.2
Ghana	No	High	High	0.6	377.9
Grenada	Yes	In distress	In distress	0.7	8
Guinea	Yes	Moderate	Moderate	1.1	147.9
Guinea-Bissau	Yes	Moderate	N/A	0.1	2.1

	Applied	Risk of debt distress		Potential DSSI Savings	
		External	Overall	% GDP	Mill $
Guyana	No	Moderate	Moderate	0.3	16.9
Haiti	No	High	High	0.9	76.2
Honduras	No	Low	Low	0.4	104.5
Kenya	No	High	High	0.7	630.8
Kiribati	No	High	High		
Kosovo	No	N/A	N/A	0.1	7.5
Kyrgyz Republic	Yes	Moderate	Moderate	0.6	52.1
Lao PDR	No	High	High	1.7	315
Lesotho	Yes	Moderate	Moderate	0.4	9.8
Liberia	No	Moderate	High	0.1	2.6
Madagascar	Yes	Moderate	Moderate	0.3	35.5
Malawi	Yes	Moderate	High	0.2	17.4
Maldives	Yes	High	High	0.9	50.7
Mali	Yes	Moderate	Moderate	0.5	82.5
Marshall Islands	No	High	N/A		
Mauritania	Yes	High	High	1.2	90.8
Micronesia	No	High	High		
Moldova	No	Low	Low	0.2	23.2
Mongolia	No	N/A	N/A	0.5	69.6
Mozambique	Yes	In distress	In distress	1.9	294
Myanmar	Yes	Low	Low	0.6	379.9
Nepal	Yes	Low	Low	0.1	24.8
Nicaragua	No	Moderate	Moderate	0.3	33
Niger	Yes	Moderate	Moderate	0.2	26
Nigeria	No	N/A	N/A	0	123.5
Pakistan	Yes	N/A	N/A	1.3	3,645.4
Papua New Guinea	Yes	High	High	1.3	326.9
Rwanda	No	Moderate	Moderate	0.1	13.2
Samoa	Yes	High	High	1.1	9.5
Sao Tome and Principe	Yes	In distress	In distress	0.4	1.7
Senegal	Yes	Moderate	Moderate	0.6	139.2
Sierra Leone	Yes	High	High	0.2	8.1
Solomon Islands	No	Moderate	Moderate	0.1	1.5
Somalia	No	In distress	In distress	0	1.7
South Sudan	No	In distress	In distress		
St. Lucia	Yes	N/A	N/A	0.2	5.2
St. Vincent and the Gren.	No	High	High	0.5	4.1
Tajikistan	Yes	High	High	0.8	63.8

	Applied	Risk of debt distress		Potential DSSI Savings	
		External	Overall	% GDP	Mill $
Tanzania	Yes	Low	N/A	0.2	138.9
Timor-Leste	No	Low	Low	0	
Togo	Yes	Moderate	High	0.4	24.4
Tonga	Yes	High	N/A	1.2	6.3
Tuvalu	No	High	N/A		
Uganda	Yes	Low	Low	0.2	91
Uzbekistan	No	Low	Low	0.4	257.3
Vanuatu	No	Moderate	Moderate	0.7	6.1
Yemen, Rep.	Yes	N/A	N/A	0.9	211.5
Zambia	Yes	High	High	0.7	165.4
Total					12,239.9

Source: https://www.worldbank.org/en/topic/debt/brief/covid-19-debt-service-suspension-initiative, retrieved on 7 January, 2021

CHAPTER 13

Economics of Covid-19 in three sub-Saharan African countries: Ethiopia, Namibia and South Africa

Patricio Goldstein and Ricardo Hausmann
Harvard University

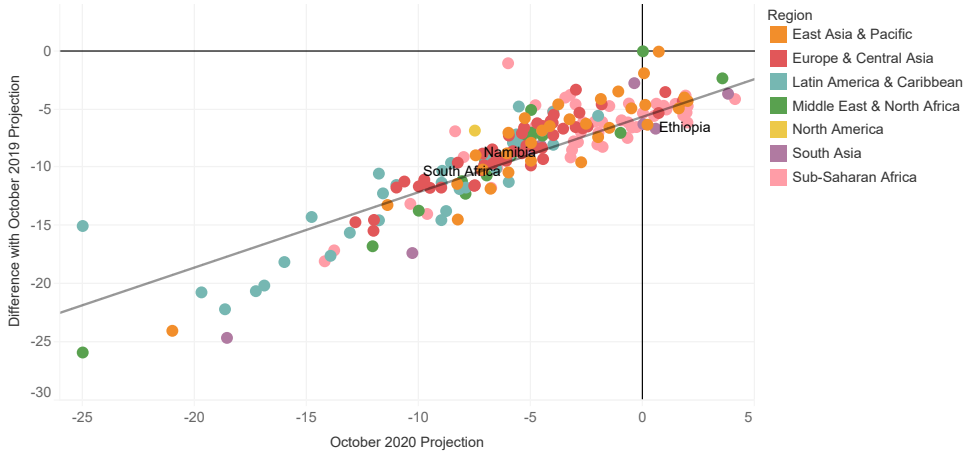
INTRODUCTION

When asked about the significance of the French Revolution, Zhou Enlai reportedly said it was "too early to tell". Assessing the epidemiological and economic performance of countries when the Covid-19 pandemic has not yet run its course is fraught with all kinds of risks. By mid-May 2020, the disease had its epicentre in Western Europe and the US. In June, many countries from Latin America, sub-Saharan Africa (SSA) and South Asia had thought that they might have successfully contained the spread. Alas, it did not last. By the early autumn of 2020, the epicentre had moved to Latin America, the Middle East and the Balkans. At the time of writing, in January 2021, Western Europe and the US are undergoing second or third waves, also accompanied by countries in Eastern Europe. Not too far behind are South Africa and Eswatini. With a significant share of the global population unlikely to receive a vaccine until 2022, it is imprudent to draw final conclusions on the ultimate toll of the pandemic in health, economic, or political terms.

Covid-19 has also brought about an unprecedented shock to the global economy, launching a contraction of economic activity worldwide. Both by the adoption of non-pharmaceutical interventions (NPIs) to reduce social interactions and by the voluntary social distancing pursued by individuals, the fight against the virus caused a supply shock in most major economies, which eventually percolated through the economy through both supply and demand channels. In terms of the pandemic's economic consequences, if we compare pre-crisis projections from the IMF's World Economic Outlook with updated estimates from October 2020, growth projections for 2020 have become 8 percentage points lower for the median country. However, growth estimates such as these vary significantly both across regions and across countries (Figure 1). The SSA region's GDP is expected to have shrunk 3% in 2020, whereas before the crisis, growth was projected to amount to 3.6%. On average, the region has been the least economically affected by the crisis, followed by East Asia. Nevertheless, regional aggregates conceal the heterogenous epidemiological and economic performance of the continent's societies. Moreover, as is the case for epidemiological outcomes, with the crisis far from over, it might not be the time yet for an enduring verdict.

In this chapter, we look at the experience of three SSA countries, in light of this broader context. Two of them – South Africa and Namibia – are upper-middle-income countries. One of them, Ethiopia, is a low-income country and the second most populous country in the region. The three economies vary not only in terms of their income per capita but also in terms of their production and export structure (with different roles for agriculture, mining, manufacturing and services), the characteristics of their labour market, their urbanisation rate and the depth of their financial system. Although all three economies faced some degree of economic slowdown and worsening fiscal space before the pandemic, the effect of, and the policy response to, Covid-19 have been different. In an effort to draw provisional lessons on the impact of Covid-19 in these economies, we will discuss the spread of the virus, the measures taken to slow it down, the external shocks associated with the global impact of the disease, and the economic policies taken to confront the challenge and the economic consequences of the pandemic, in terms of growth, fiscal and financial outcomes and prospects.

FIGURE 1 IMF WORLD ECONOMIC OUTLOOK, GDP GROWTH 2020 PROJECTIONS



Source: IMF October 2019/20 WEO. In Ethiopia, data for 2019 represents fiscal year 2018/19.

IN THE MIDDLE OF THE STORM

With a population of over 1.1. billion – or 15% of the global population – sub-Saharan Africa represents only 3% of the total confirmed deaths due to Covid-19. Beyond plausible under-reporting due to weak efforts in testing and identification of Covid-19-related cases or deaths, it is undeniable that the region has, so far, been amongst the most resilient with regards to the pandemic, in particular in comparison with advanced economies. As a region, SSA never reached at any point in time the daily levels of confirmed Covid-19 deaths or cases that European, Middle Eastern or Latin American countries saw throughout the year, and altogether avoided the 'first wave' of cases that burdened other countries. Beyond regional aggregates, the majority of SSA countries are – after the

East Asian countries that controlled the evolution of the pandemic early on in the year – amongst the countries with the lowest death toll and lowest number of cases detected by the end of 2020 (Figure 2).

This outcome was not necessarily expected at the start of the pandemic. SSA countries have, compared to other regions, fewer hospital beds per population (8 per 10,000 people, compared to 20 in Latin America and 40 in East Asia, according to the World Health Organization), fewer doctors (2 per 10,000 people, compared to 21 in Latin America and 16 in East Asia), lower capacity to conduct diagnostic tests, and generally a lower level of health expenditure per capita and as a share of GDP. Equally important, lower-income countries have elements that can make their capacity to fight the spread of a virus more difficult. Their households are larger, implying higher potential for within-family transmission. With self-employment and micro-enterprises representing the majority of employment, low-income countries have more households living on a day-to-day basis for whom lockdowns are harder to comply with and have governments without the wherewithal to make social transfers to compensate for the lost income.

FIGURE 2 COVID-19 CONFIRMED DEATHS AND CASES PER MILLION PEOPLE, 2020

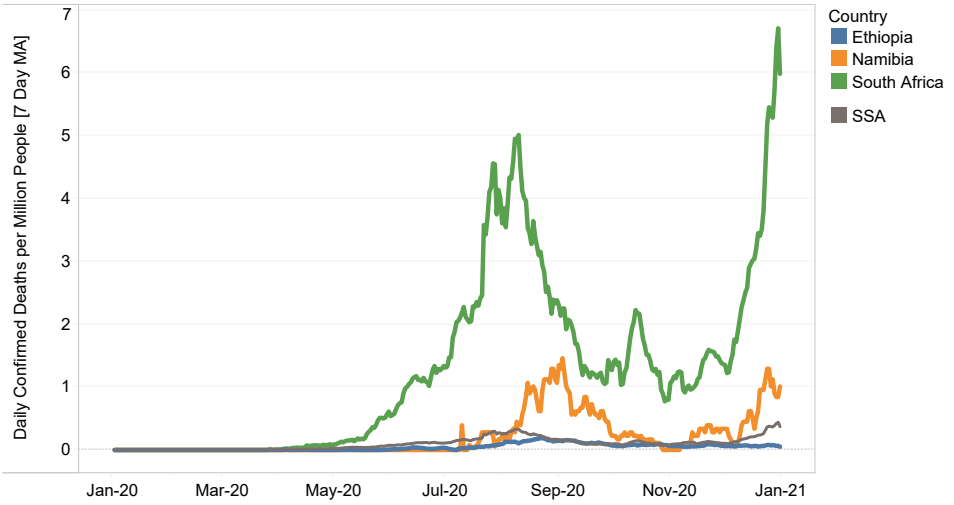
Source: Our World in Data

Nevertheless, other countervailing factors – such as an overall young population (relative to other regions), warmer temperatures and early decisive action by the region's governments to reduce the spread of virus, supported by the successful experience of community health systems in the fight against previous infectious diseases – appear to have been key so far in reducing the potential damage of the virus. Perhaps more importantly, Covid-19 is a disease that is transmitted from person to person. On average, social interactions tend to increase with economic development, as the division of labour deepens, urbanisation is higher, public transportation becomes more important, firms increase in average size

and international contacts expand. For that reason, it is not surprising that the first peaks happened in wealthier economies rather than in low-income countries and, within countries such as the US or Italy, in the higher-income regions.

Ethiopia, Namibia and South Africa have shown different trajectories throughout the pandemic, which share nevertheless important similarities. The three countries managed to 'flatten the curve' early on in the pandemic and avoid an uncontrollable succession of cases and deaths at a time when the US and Western Europe were undergoing a first wave (Figure 3). Although at different times and magnitudes, the pandemic resurfaced later in the year in all three countries. South Africa experienced a peak of cases in August and has seen a resurgence of cases by the end of 2020, whereas Namibia experienced a much smaller peak in September (also surging again by the end of the year). Ethiopia, which experienced a peak in August, never reached a comparable level of cases or deaths and has, by the end of 2020, avoided a significant second wave. In all three cases, the countries have so far managed to avoid prolonged peaks, with periods of high numbers of cases and deaths rapidly brought under control, in contrast to the experience in many Latin American countries.

FIGURE 3 COVID-19 CONFIRMED DEATHS PER DAY PER MILLION PEOPLE, 7 DAY MA



Source: Our World in Data

At the time of writing, the epidemiological outcomes in all three countries are very heterogenous. South Africa is the country that has been the most affected by the pandemic in the African continent, with more than 30 times the number of confirmed deaths per capita than Ethiopia, five times more than Namibia by the end of 2020, and more than ten times more than the regional weighted average.

Given than there is a positive correlation between healthcare and government capabilities on the one hand, and cases and deaths on the other, it is not evident what factors have driven the differences in cases and mortality. As we argue below, the intensity of social interactions given the structure of the countries' economies could be a significant contributing factor. Ethiopia's lower urbanisation rate (21% of th population, compared to 51% in Namibia and 67% in South Africa) and, correspondingly, the fact that two thirds of Ethiopia's population is estimated to work in agriculture, compared to a fifth in Namibia and a 20th in South Africa, probably contributed to a slower spread of the virus so far. But while these characteristics may affect the speed of the spread, they do not necessarily impact the proportion of the people that will be ultimately affected by the virus at the end of the pandemic.

THE LEGACY OF LOCKDOWNS

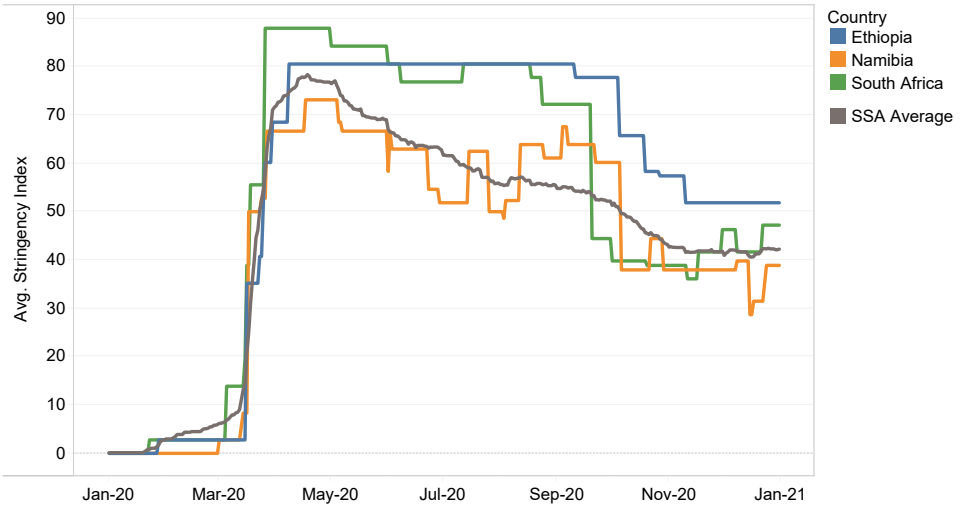
The control of the pandemic was facilitated in all three countries by a series of non-pharmaceutical interventions that have been implemented since mid-March.[1] Soon after the first confirmed cases, the Ethiopian authorities closed the country's schools and banned crowded events, shut down land borders (except for the transport of goods) and reduced Ethiopian Airlines' flights, and a introduced a variety of measures to promote physical distancing including the closure of non-essential public and personal services. A state of emergency was declared in April, permitting the government to continue the implementation of more stringent NPIs. Domestic travel restrictions and quarantine policies for international arrivals were also implemented to limit the spread of cases. The government of Namibia also declared a national state of emergency by the end of March and introduced measures to facilitate physical distance, which included lockdowns for non-essential workers, school closures, limits on public gatherings, domestic travel restrictions, the suspension of passenger flights and the promotion of working from home. By declaring a national state of disaster, the government of South Africa implemented similar measures to introduce social distancing, which included travel bans, school closures and screening at international borders. A lockdown was enforced by the end of March and gradually relaxed after that.

The Oxford Covid-19 Government Response Tracker's (OxCGRT) Stringency Index illustrates how the three countries adopted NPIs of comparable severity around similar dates, following regional and global trends (Figure 4). The direct result of the NPIs – and of voluntary changes in behaviour – has been a reduction in mobility, and ultimately a reduction in cases and deaths (Deb et al. 2020). Changes in mobility have often been estimated using variations in visits and lengths of stay as captured by Google Maps with reference to a pre-pandemic baseline of January and February 2020. Figure 5 shows that

1 Information on public health measures adopted by each of the three countries is primarily based on the databases published by the Oxford Covid-19 Government Response Tracker (OxCGRT) and the Assessment Capacities Project's (ACAPS) Covid-19 Government Measures Dataset.

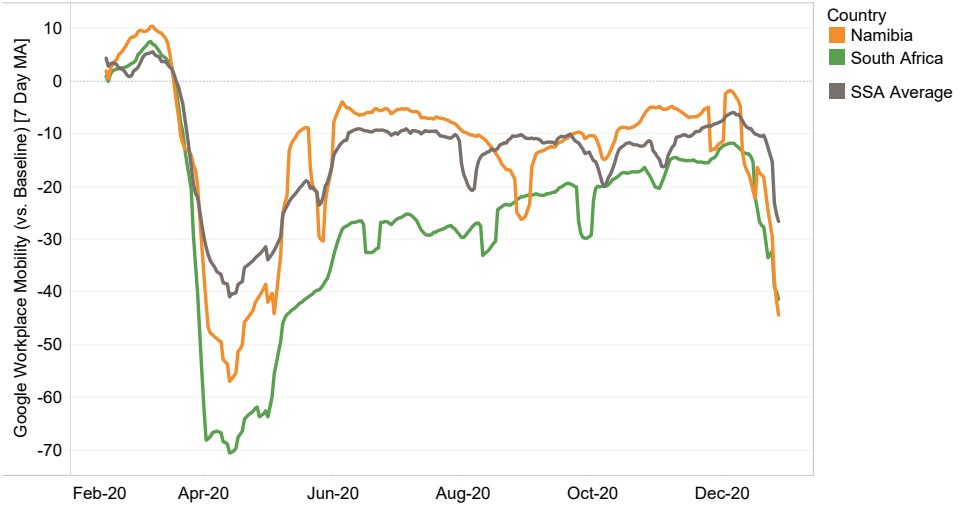
after the introduction of the initial NPIs, both South Africa and Namibia – as well as the African simple average – experienced a sharp drop in workplace mobility (which also dropped for other mobility categories such as retail and creation, groceries and pharmacies, public transport and parks). Both countries reached a peak decline in mobility in the months of April and May, after which mobility recovered until the acceleration of the pandemic at the end of the year lead to new declines in mobility, especially in South Africa.

FIGURE 4 OXCGRT GOVERNMENT RESPONSE STRINGENCY INDEX



Source: Oxford Covid-19 Government Response Tracker

FIGURE 5 GOOGLE WORKPLACE MOBILITY



Source: Google

The reduction in the stringency of the NPIs – an easing of domestic and international travel restrictions as well as a partial return to schools – and the consequent increase in mobility occurred at the same time in South Africa and Namibia, and co-occurred with an increase in cases and deaths that built up to the pandemic's first peak in both countries. Although the relaxation of restrictions was accompanied by measures to, for example, increase public mask wearing and an upgrade in testing capabilities, the lifting of the lockdown eventually led to a rapid increase in spread, which obliged countries to reinstate harsher NPIs. South Africa closed schools for four weeks in August, while Namibia reintroduced more stringent measures to reduce non-essential movement.

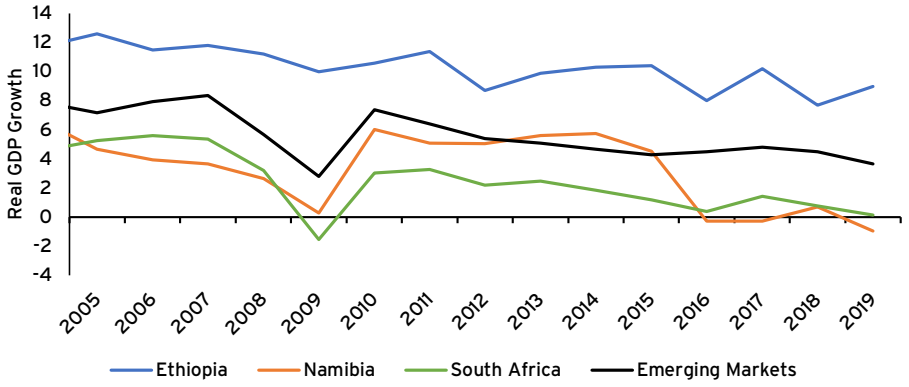
By October, all three countries had significantly reduced the intensity of their NPIs, although never getting back to a pre-pandemic 'normal'. Ethiopia saw its land borders reopened that same month, as well as an increase in the destinations connected by international flights, and the ban on some public events was lifted. Nevertheless, NPIs such as the mandatory wearing of face masks in public places and limits on public gatherings remain in place. As cases surged again towards the end of the year, in December South Africa tightened restrictions on movement in regions of the country with high numbers of cases, leading to a new reduction in mobility.

As in other countries, lockdowns and ultimately voluntary reductions in worker or consumer mobility were initially effective in delaying the spread of the virus but at a large economic cost. By reducing firms' and workers' ability to produce, lockdowns have directly prompted a supply shock in the economy, with eventual consequences for both aggregate supply and demand. The decline in economic activity associated with NPIs to slow down the pandemic has generated new trade-offs for economic policy that both advanced and developing country governments have had to adapt to through the year (Hausmann and Schetter 2020). As countries will face further epidemiological peaks before they can get access to vaccines, they will need to tighten their NPI policies and face the associated economic costs, perhaps aggravated by reduced tolerance for new restrictions.

FROM SLOWDOWN TO RECESSION

The pre-crisis performance of the Ethiopian, Namibian and South African economies is key to understanding how these three countries have been affected by the Covid-19 crisis, which has aggravated their pre-existing structural challenges. Before the pandemic, all three countries were facing an economic slowdown with a worsening fiscal situation. While Ethiopia – starting from a significantly lower income level – managed to maintain high growth rates throughout the 2010s, South Africa and Namibia experienced GDP growth rates below the emerging market average over the last decade, and negative per capita growth rates in later years (Figure 6).

FIGURE 6 GDP GROWTH RATES



Source: IMF. In Ethiopia, data for 2019 represents fiscal year 2018/19.

Throughout the last decade, Ethiopia has struggled with balancing the need to keep up high levels of public investment (in both physical and human capital) with maintaining macroeconomic stability. The simultaneous boost in imports and investment which marked the country's growth acceleration in 2004 was made possible by a substantial increase in foreign aid and concessional lending, as well as a shift in government spending towards capital expenditures. With foreign aid inflows decreasing as a share of GDP and exports growing insufficiently to meet the country's import needs through the 2000s, the government sought to fill in the gap through foreign non-concessional lending from private markets and bilateral creditors (mainly China), as well as to mobilise savings through an expansion of domestic financial institutions. Nevertheless, by 2017 some of the state-owned enterprises encountered difficulties servicing the non-concessional external loans they had used to fund their investments. This ultimately led multilateral institutions to condition additional support on a halt in non-concessional borrowing and a renegotiation of its terms. The government reduced public investment, but the decline it was able to achieve was smaller than the reduction in external financing and forced it to resort to financial repression and inflationary finance, which, in the context of a dual exchange rate regime, led to a rising parallel market exchange-rate premium. Economic activity was eventually hurt by a growing shortage of foreign exchange to finance intermediate inputs and capital goods. Recognising the need to correct these macroeconomic imbalances, the government initiated in 2019 the implementation of a comprehensive reform agenda aimed at correcting fiscal and monetary imbalances as well as introducing competition in key government-led sectors in the economy. With the start of the Covid-19 crisis, the government was forced to add the control of the outbreak to a long list of ambitious objectives.

South Africa entered 2020 after having experienced a decade-long decline in GDP growth. Since 2009, exports have failed to fully recover from the end of the commodity super-cycle, which explains in part the country's subpar economic performance vis-à-vis other

emerging markets. A sharp fall in private and public investment has also contributed to the economy´s deceleration since 2015. Lower growth has prevented South Africa from improving employment and unemployment levels, which showed worrying trends even before the Covid-19 shock. South Africa's fiscal position has progressively deteriorated in the same period, driven by continuously rising expenditures that have not been matched by an increase in revenues. Sluggish growth, and in particular the investment slowdown, as well as the deterioration of the country's fiscal position are likely to have been caused by the consequences of the political orientation and corruption of the Zuma presidency. State capture led to a deterioration of state capacity and in the performance of state-owned enterprises – in particular the vertically integrated power company, Eskom – which has seriously undermined productivity growth and competitiveness, while adding to the increasing stock of debt. The steady decrease in the quality of governance in the Zuma years is also likely to have led to a decline in investor confidence, through a fear of increase taxation, as well as de facto or de jure expropriation. By the time the Covid-19 crisis began, the current government had made some efforts to overcome this legacy, although key reforms were paralysed, leaving potential investors uncertain about the government's ability to adopt the needed reforms. Against this backdrop, the pandemic brought an unprecedented health, social and economic challenge to an already weak economy.

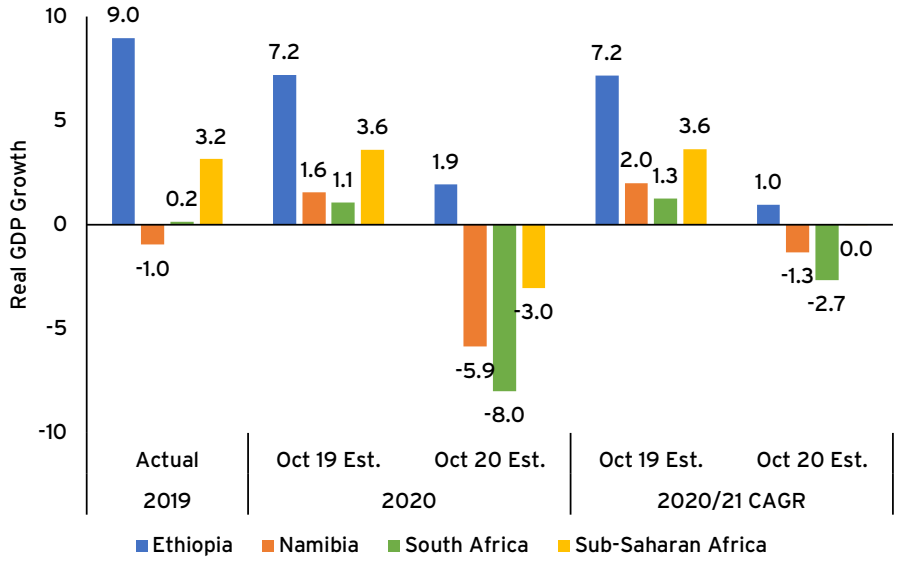
Finally, during the past decade Namibia shared some similarities with South Africa in terms of the effect of the commodity super-cycle and its aftermath. Favourable terms of trade and a surge in foreign investment throughout the 2000s permitted a growth acceleration that quintupled the country's export sector, tripled foreign investment and allowed Namibia to close its income gap with South Africa by more than 25 percentage points in less than two decades. Through the boom, the country rapidly increased public expenditures, amplifying the impact of the mining boom on the rest of the economy – in particular, its non-tradable services sector – but leading to a significant increase in public debt levels. With the end of the commodity super-cycle, the country has seen not only a decline in export performance, but also investments as a share of GDP declining dramatically from a peak of 35% in 2014 to 10% in 2019. Moreover, the government was forced to pursue a contractionary fiscal policy to regain debt sustainability, which triggered a recession. In a similar fashion to South Africa, the Covid-19 pandemic has only hardened the economic and fiscal challenges that the country was already trying to overcome.

AN UNCONVENTIONAL SHOCK

In 2020, Covid-19 severely impacted the levels of economic activity in all three countries. When comparing pre-crisis projections of growth with most recent ones, the Ethiopian economy, which was expected to decelerate to a still high growth rate of 7.2% in 2020, is now projected by the IMF to have grown by only 1.9% (Figure 7), a deceleration of 5.3 percentage points. Still, this leaves Ethiopia as one of the fewer than 30 economies to have

experienced positive growth in 2020. By contrast, South Africa's economy is expected to have contracted by 8% and Namibia's by 5.9%, both showing a performance significantly below than the regional average. These represent downward growth revision for 2020 of 9.1 percentage points for South Africa and 7.5 percentage points for Namibia. According to the IMF, Ethiopia's GDP growth in 2021 is expected to be 1.9%, while Namibia and South Africa's economies are expected to remain below 2019 levels at the end of 2021.

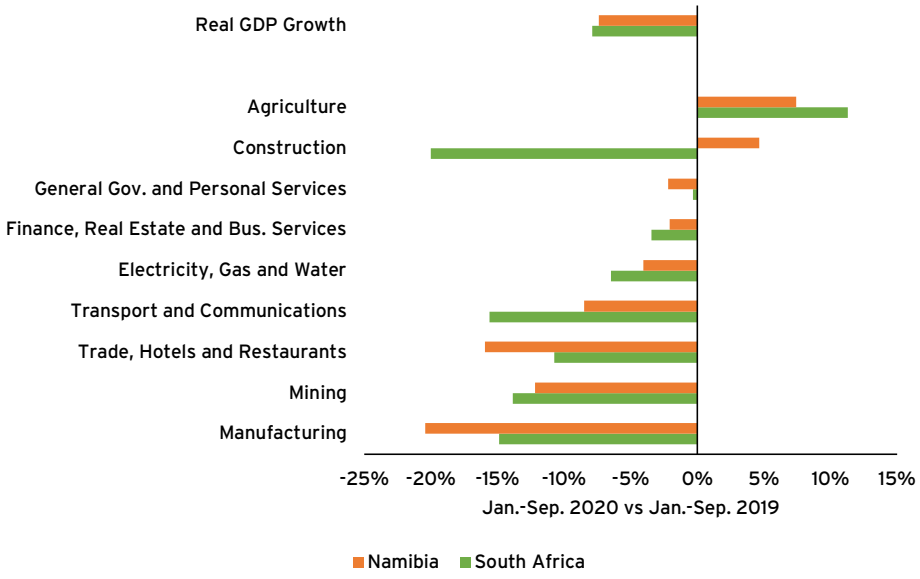
FIGURE 7 IMF WEO GDP PROJECTIONS



Source: IMF October 2020 WEO. In Ethiopia, data for 2019 represents fiscal year 2018/19.

The Covid-19 crisis has been atypical in terms of how heterogenous its effects have been on different sectors of the economy, with not every industry has been equally impaired by lockdowns or mobility restrictions and the demand shock. In Namibia and South Africa, the sectors that have been the most affected have been wholesale and retail trade, accommodations, and transport and ICT. The construction industry was particularly badly hit in South Africa (Figure 8). Both countries have also suffered a significant contraction of their mining and manufacturing sectors, likely to external market conditions and lockdown measures. Ethiopia does not publish quarterly national account data, but comparing growth by industry in the country's fiscal year (which starts in July) with previous years, one can observe a strong slowdown in the growth of construction, hotels and accommodation, transportation and communication, as well as wholesale and retail trade.

FIGURE 8 GDP GROWTH BY INDUSTRY (FIRST SEMESTER 2020)

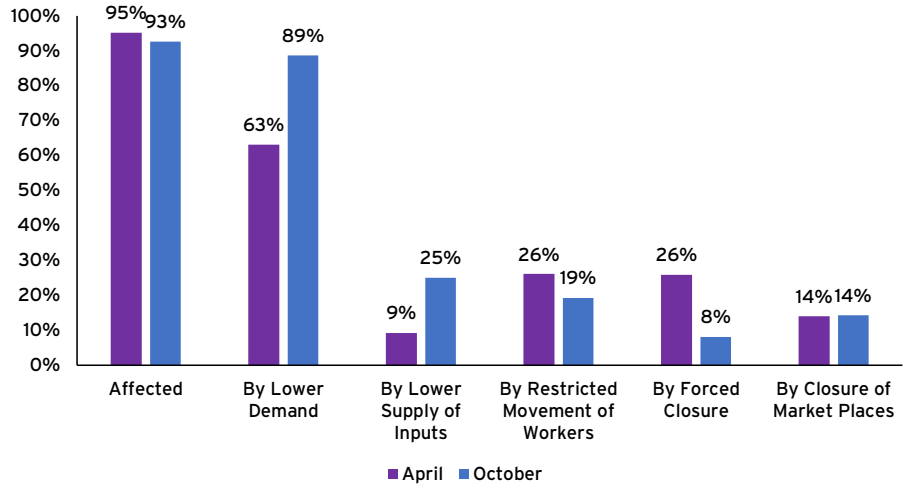


Sources: Statistics South Africa, Namibia Statistics Agency

The economic crisis has had a large human cost on a global scale, from which Ethiopia, Namibia and South Africa have not been exempted. As mobility restrictions affected the workforce's ability to go to work or search for jobs, their lifting is revealing dramatic effects in many economies. In South Africa, the destruction of formal sector jobs saw unemployment reach 30.8% in the year's third quarter, the highest since 2003. A repeated rapid phone survey by the World Bank in Ethiopia estimated at the onset of the pandemic that 8% of respondents in the country had lost their jobs, with the majority of job losses related to Covid-19 (although more recent survey rounds have seen a recovery of employment). In all three countries, job and labour income losses, along with declines in other sources of income such as remittances in Ethiopia, are likely to push a substantial number of households back into poverty.

It is unclear at what pace the economy will recover in these three countries. While third-quarter data for South Africa show a moderate recovery of the economy, led by the mining, manufacturing and trade sectors, this has not been the case for Namibia, where mining and manufacturing have reduced their levels of activity. As late as October, 93% of Ethiopian firms surveyed by the World Bank still considered themselves affected by Covid-19, with 89% seeing their performance affected by lower demand, 25% by lower supply of inputs, and 19% by the restricted movement of workers (Figure 9). These preliminary indicators, which have not substantially changed since the beginning of the crisis, indicate a long recovery ahead.

FIGURE 9 ETHIOPIA - HOW ARE FIRMS AFFECTED BY COVID-19



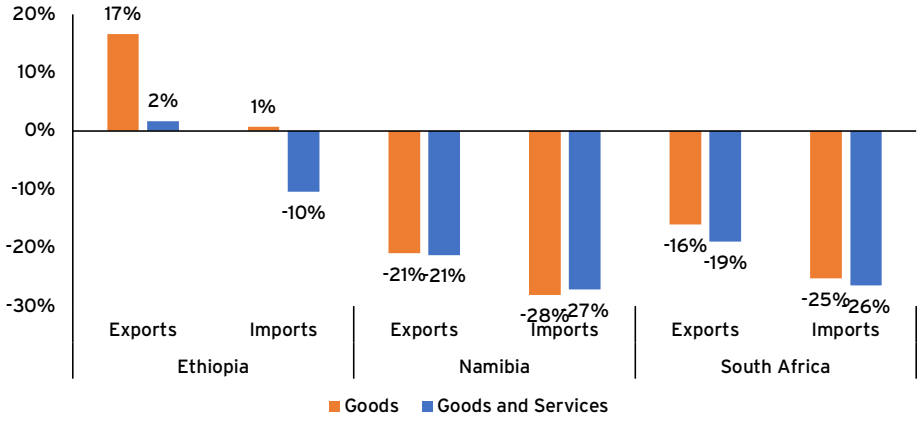
Source: World Bank Firm Covid Monitoring Survey

TACKLING THE EXTERNAL SHOCK

The global decline in economic activity affected trade and capital flows. A reduction of global merchandise trade by 5.6% and services trade by 15.4%, a forecasted fall in foreign direct investment of up to 40% (as estimated by UNCTAD) and the decline in remittances to low- and middle-income countries by 7% (estimated by the World Bank) have severely affected not only economic activity in developing countries, but also sources of foreign exchange and new knowhow for structural transformation.

The tradable sectors in our three countries displayed a disparate performance throughout the initial months of the crisis. Despite a significant fall in global trade, Ethiopia managed to increase its merchandise exports by 17% in the first semester of 2020, a growth rate unmatched by most advanced and developing economies (Figure 10). The country saw a surprising outperformance of its mining sector, to a great extent related to a crackdown on illegal mining, which had been one of the main sources of the country's export slowdown in previous years. Moreover, the recovery of the country's horticulture and coffee exports helped compensate for the decline in manufacturing exports in the first half of the year, as well as the sharp fall in services exports, which were hit by the sudden stop in air travel, and the consequent decline in tourism flows. In the same period, goods and services imports declined by 10% due to a variety of factors, including lower income, the interruption of supply chains and air travel and lower oil prices, although merchandise imports still increased by 2%. The reduction in goods and services exports in both South Africa and Namibia have been far steeper as the countries have seen decreases in their exports of goods and services by 21% and 19%, respectively, worsening their export underperformance of the 2010s.

FIGURE 10 GOODS AND SERVICES TRADE (FIRST SEMESTER 2020 VS 2019)

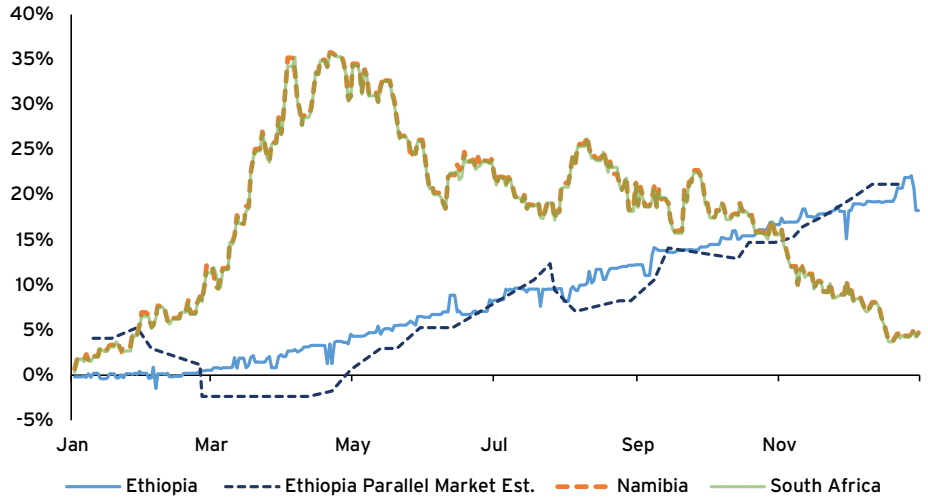


Sources: IMF, National Bank of Ethiopia

In terms of external balances, the current account deficit is expected to narrow in all three countries. In the case of Namibia and South Africa, this is due mainly to a compression of domestic demand accompanied by a large real exchange rate depreciation. In Ethiopia, a surprisingly resilient export performance was reinforced by the effect of lower imports associated with slower demand growth and lower energy prices. In Namibia, the current account deficit that the country had sustained since 2008 will likely be reversed in 2020, with additional receipts from the Southern African Customs Union. Ethiopia witnessed a strong decline in foreign direct investment (FDI), which was offset by a significant rise in long-term disbursements by official international financial institutions In South Africa, by contrast, portfolio outflows kept the capital account negative for the first three quarters of the year. Namibia also experienced large capital outflows in the second quarter of the year.

The real exchange rate in South Africa depreciated rapidly in the second quarter of the year but appreciated significantly after that. Namibia pegs to the South African rand and hence had a similar performance (Figure 11). Ethiopian monetary authorities accelerated the pace of the devaluation of the birr in an effort to correct external imbalances, but by October had only achieved a moderate depreciation of the real exchange rate, which is still at historically high levels.

FIGURE 11 EXCHANGE RATE PERCENTAGE CHANGE SINCE JAN 1, 2020



Sources: Capital IQ, Facebook

FISCAL OUTCOMES

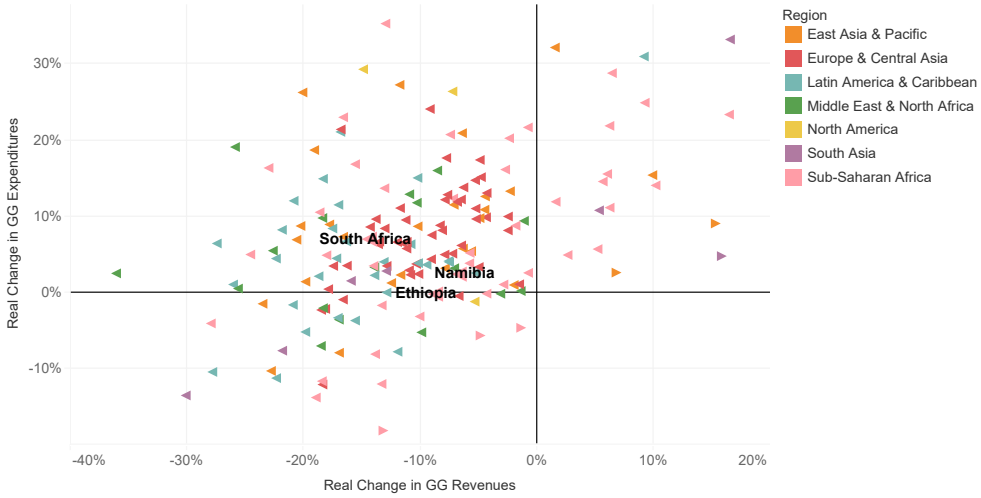
The Covid-19 shock has triggered a significant widening of fiscal deficits in both advanced and developing economies. Fewer than ten economies are expected to reduce their real net borrowing in 2020 (Figure 12). As was the case in the global financial crisis, tax revenues fell in most of the world's economies by more than the contraction of GDP. This was not only caused by the economic slowdown but also, in many cases, by policy or administrative initiatives impacting tax collection during the crisis. The increase in real expenditures can be explained not only by the need to increase health spending to tackle the epidemiological crisis, but also by the economic and social policy measures that were implemented in both advanced and developing countries to assist households, firms and the financial sector through the crisis. The increase in net borrowing has led to increases in expected debt-to-GDP ratios in almost every economy.

Our three countries implemented fiscal measures to tackle the crisis, in accordance with their fiscal space. To ease the tax burden on the private sector at the peak of the crisis, South Africa provided tax subsidies for employees below a certain threshold and deferred selected tax payments, whereas Ethiopia provided tax exemptions for firms paying employee salaries through the crisis, as well as forgiveness on tax debt. All three countries increased their health expenditures by close to 0.5 percentage points of GDP. Non-health expenditures followed very different paths.[2] South Africa announced support in terms of social and economic assistance of about 4.9% of GDP, whereas Namibia and Ethiopia

2 Data from the IMF Database of Country Fiscal Measures in Response to the Covid-19 Pandemic

assigned 0.6% and 1%, respectively, to this objective. In South Africa, additional spending has been dedicated to supporting unemployment insurance benefits, increase transfers and grants to households, distribute food, and assist firms in selected sectors. With similar objectives, Ethiopia assigned expenditures to food distribution for vulnerable households, a scaling of the country's transfer programme (PSNP), as well as assistance to schools and to the country's agriculture sector. Namibia financed a one-off transfer to assist citizens affected by the crisis and provided waivers on tax payments and water spending. In terms of below-the-line measures, South Africa's guarantee programme to assist business loans represented 4.1% of GDP while Namibia's equivalent programme received funding of up to 1.3% of GDP. Ethiopia did not have a specific guarantee programme but provided capital injections into the public Development Bank of Ethiopia of about 0.6% of GDP for a similar purpose.

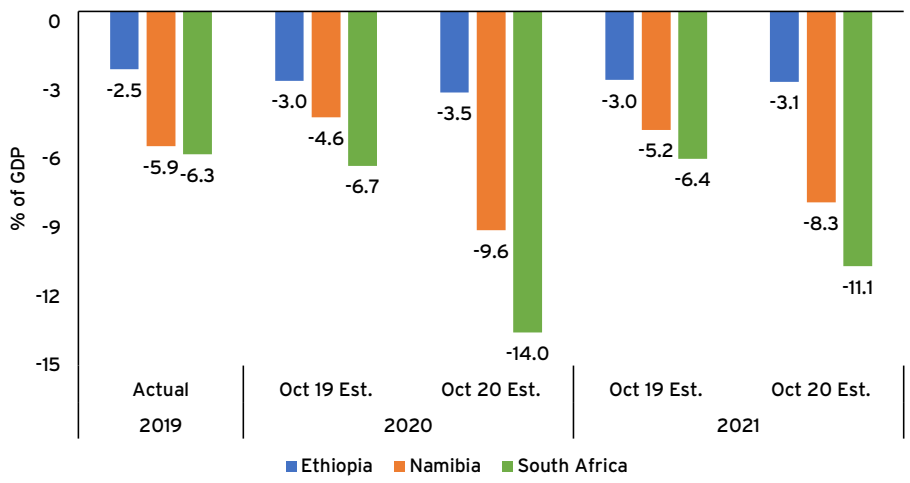
FIGURE 12 EXPENDITURE AND REVENUE (PERCENT REAL CHANGE, 2020)



Source: IMF October 2020 WEO. In Ethiopia, data for 2019 represents fiscal year 2018/19.

As a consequence, as shown in Figure 13, Ethiopia, Namibia and South Africa saw a worsening of their fiscal balances by 0.5, 5.0 and 7.3 percentage points, respectively, in 2020 relative to pre-crisis expectations of 3.0% 4.6% and 6.7%, respectively. These different outcomes are a reflection of fiscal capacity. Overall, even in a fragile macroeconomic context, South Africa managed to implement a more sizeable countercyclical fiscal policy programme, both to absorb the decline in revenues but also to increase fiscal expenditures. The increase in real expenditures was smaller in Namibia, where the space for countercyclical policy was smaller, and even more negligible in Ethiopia.

FIGURE 13 GENERAL GOVERNMENT NET LENDING

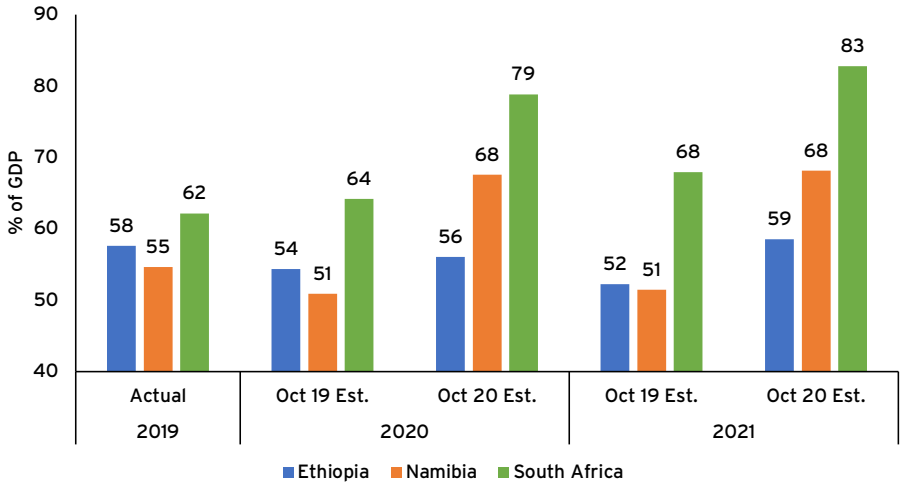


Source: IMF October 2020 WEO. In Ethiopia, data for 2019 represents fiscal year 2018/19.

The deterioration in fiscal accounts is leading to a substantial increase in debt-to-GDP ratios. South Africa is expected to increase its debt-to-GDP ratio from 62% in 2019 to 79% in 2020 and 83% in 2021 (Figure 14). The government's debt outlook analysis projects debt rising to 97.2% of GDP in the 2022/23 fiscal year and 106% of GDP in 2023/24, in the absence of major fiscal and structural reforms. Although the country has shown that it has the short-term fiscal space to manage the current recession, without major reforms, the country could face a macroeconomic crisis in the near future. The continuous sell-off of government assets by non-residents in the last five years has implied the need to fund large deficits domestically and has caused an increase in interest rates. Country risk has increased substantially since 2011, decoupling itself from other emerging markets, and the government's yield curve has become much steeper, reflecting concerns about fiscal sustainability and medium-term inflation rates. Funding the country's fiscal imbalances through the domestic banking sector could eventually hit a limit and damage the country's financial system and domestic debt markets. In this context, a credible commitment towards medium-term fiscal sustainability – in particular regarding the reduction of current expenditures, given the already high tax revenues – could help the government better manage the recovery.

In the case of Namibia, the Covid-19 shock is expected to increase debt-to-GDP levels from 55% in 2019 to 68% in 2020. To avoid an undoing of the country's fiscal consolidation efforts that were pursued since 2016, Namibia will have to implement further initiatives for revenue mobilisation – through an expansion of the tax base – and optimisation of public expenditures.

FIGURE 14 GENERAL GOVERNMENT GROSS DEBT



Source: IMF October 2020 WEO. In Ethiopia, data for 2019 represents fiscal year 2018/19.

Ethiopia's debt trajectory has been less affected by the shock, not only because of the country's better growth performance but also because financial repression keeps domestic real interest rates negative. A strong budgetary performance in the first quarter of 2020 and a fast recovery in the third quarter have partially offset the deterioration of revenue in the depth of the crisis. Capital expenditures from the general government continued expanding, while real current expenditures shrank in 2019/20. More importantly, for the first time in ten years, Ethiopia has seen negative foreign borrowing from its state-owned enterprises, which has contributed significantly to the country's fiscal consolidation path. The country has not been as successful in the correction of its external balances through the year, as evidenced by the still high parallel exchange market premium and the lack of a substantial real exchange rate depreciation. It remains to be seen to what extent Ethiopia can reprise the high level of public and private investment it needs to develop its economy without re-aggravating its fiscal challenges and further worsening its external imbalances.

CONCLUSION

Putting a definitive verdict on an ongoing pandemic is a task full of pitfalls. Covid-19 first impacted high-income countries, where dense human networks facilitated human-to-human transmission. These countries are also expected to be the first to vaccinate their populations and are the most able to provide fiscal and monetary policy support in the meantime. From this perspective, SSA countries stand in stark contrast, given their level of development, a larger proportion of the population lives in rural areas, works on agriculture, works in small production units and interacts with fewer people on a daily basis. These factors make transmission slower on average. SSA countries also have

younger populations, and hence fewer people at risk. SSA countries benefitted from these factors in 2020. However, low-income countries cannot rely as much on their healthcare systems when their citizens get sick, and their governments have much smaller fiscal space to absorb tax revenue declines or to expand spending in the event of a crisis.

The three countries we have studied in this chapter show the relative importance of these factors. In 2020, the disease caused more infections and deaths in the richest country in our sample, South Africa, followed by Namibia and much smaller direct public health impact in Ethiopia. The countries' governments responded to a large extent according to their fiscal space – South Africa had the most counter-cyclical fiscal and monetary policy, followed by Namibia, with Ethiopia in a last and distant place. According to the first rationale presented, rich countries are expected to be more effected by the pandemic. Nevertheless, in accordance with the second rationale, these countries are in a position to ultimately better manage the crisis. In the context of 2020, the first logic dominated. South Africa had the worst economic performance of the trio although it had the most counter-cyclical policy. Ethiopia had one of the best global growth performances, although it had the least accommodative fiscal policy stance.

There is more than one argument to make us wary about projecting the future as a mere repetition of the past. First, the fact that poor countries are more rural does not mean that the virus will not eventually get there, and when it does, it will spread more easily given the larger size of the average household as well as more limited access to water and healthcare. Second, the capacity to vaccinate may depend on government income and capabilities, given the weakness of the coordinated international response. On the other hand, more advanced economies, such as South Africa and to a slightly lesser extent Namibia, have deep financial markets that can help the government, firms and households smooth out the effect of the shock, compared with the shallower financial system in place in Ethiopia. But this is true only if the financial system is able to maintain its balance. If markets were to lose confidence in the solvency of the government or of banks, a financial crisis would ensue that would make the situation more dire for the countries with a more developed but compromised financial system.

Both Namibia and South Africa have been able to bring down their infection peaks once. At the time of writing, they are in the midst of a second peak. Will they be able to bring down infection rates again? Initial outcomes look promising, but achieving a second drastic reduction would be an important feat as many countries, especially in Latin America, have adopted harsh lockdown policies that only delivered plateaus of infection at high levels.

The three cases also show the importance of international cooperation, knowledge creation and financial support. NPI policies need to be made epidemiologically more effective and at the same time economically and socially less costly. Creating real-time systems that are able to assess the situation and extract lessons is key. The vaccination process needs to be accelerated and made available more globally. Financial assistance needs to be made

available, even on a contingent basis, in order to prevent markets from falling into the bad side of multiple-equilibria situations. Having said that, Covid-19 has made countries poorer and more indebted than they expected to be in the months before Covid-19 struck. They are borrowing resources from the future to better manage the present. Some, like South Africa and Namibia, will eventually need to adjust to this reality. Committing to this adjustment sooner rather than later may help maintain market access so that they can continue borrowing the resources that can help them navigate the short run. Others, like Ethiopia, have precarious or no access to non-official finance. Debt relief may need to play a larger role in these situations.

The game is not over until it's over. We may have just seen the end of the beginning of Covid-19. The effects have been large and painful. But the rest of the game may resemble little the part we have seen. However, the lessons we may extract from what we have lived through may help us better manage what remains to happen.

REFERENCES

Deb, P, D Furceri, J Ostry and N Tawk (2020), "The Effect of Containment Measures on the Covid-19 Pandemic," IMF Working Paper 20/159.

Hausmann, R and U Schetter (2020), "Horrible Trade-Offs in a Pandemic: Lockdowns, Transfers, Fiscal Space, and Compliance," CID Faculty Working Paper No. 382.

ABOUT THE AUTHORS

Patricio Goldstein is a Research Fellow at the Growth Lab at Harvard University.

Ricardo Hausmann is Rafik Hariri Professor of the Practice of International Political Economy and Director of the Growth Lab at Harvard Kennedy School, and External Faculty at the Santa Fe Institute.

CHAPTER 14

How did Egypt soften the impact of Covid-19?

Jamal Ibrahim Haidar[1]
The American University in Cairo and Harvard University

The Covid-19 pandemic has drastically disrupted people's lives, livelihoods, and economic conditions around the world. The global shock has resulted in a tourism standstill (Djankov 2020), significant capital flight (Djankov and Panizza 2020), and a slowdown in remittances (Nonvide 2020), resulting in an urgent balance-of-payments need. Egypt responded to the crisis with a comprehensive package aimed at tackling the health emergency and supporting economic activity. The Ministry of Finance acted swiftly to allocate resources to the health sector, provide targeted support to the most severely impacted sectors, and expand social safety net programmes to protect the most vulnerable. Similarly, the Central Bank of Egypt adopted a broad set of measures, including lowering the policy rate and postponing repayments of existing credit facilities. The next section highlights the experience of firms in Egypt following these policies.

THE ECONOMIC OUTLOOK AND FIRM EXPERIENCE

The Egyptian economy proved resilient to the immense human and financial costs caused by the global Covid-19 pandemic. This resilience may be explained by the implementation of the economic reform programme since 2016 that provided more fiscal space to withstand the adverse impact of the Covid-19 crisis. However, that Egyptian economy is holding up is also due to the rapid response to limit the impact of the virus that were implemented by the Egyptian government since early 2020. These actions enabled the country to avoid a full lockdown policy in 2020.

1 The author would like to thank Haya Anis for outstanding research assistance.

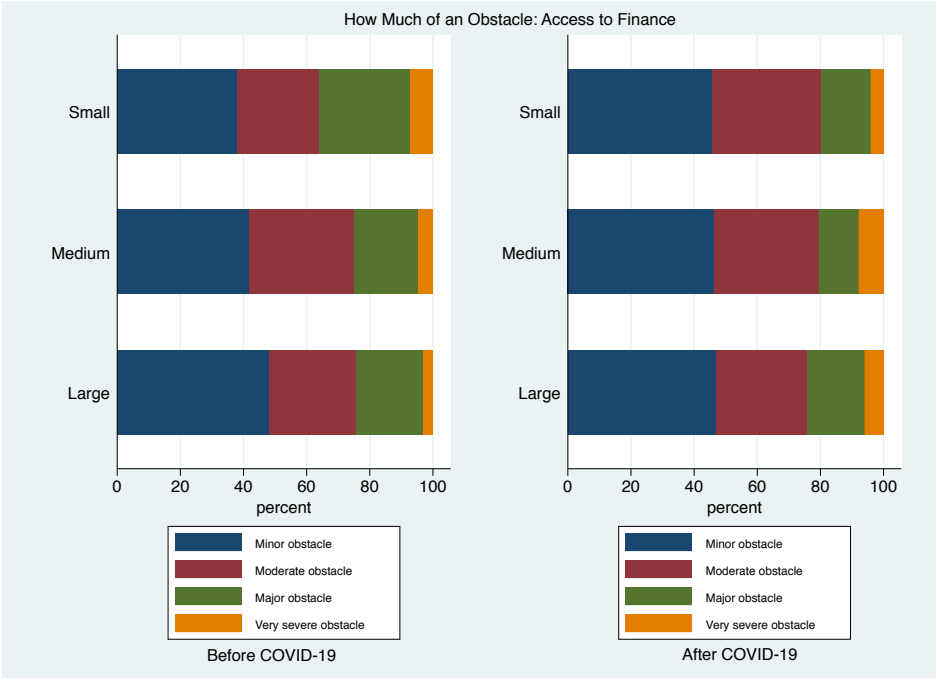
The World Bank Enterprise Surveys[2] data show that private sector firms in Egypt did not express financial concerns due to Covid-19. Figure 1a shows that, in assessing the degree to which access to finance was an obstacle, around two-fifths of small firms surveyed before Covid-19 considered it a minor obstacle; around a fifth considered it a moderate obstacle; around a fifth considered it a major obstacle; and around 10% considered it to be a very severe obstacle. This distribution of sentiment more or less held for medium-sized and large firms surveyed before Covid-19, albeit with some adjustments to reflect progressively positive sentiments as firm size increases from medium to large. After Covid-19, firms seemed to adjust their attitudes such that small, medium-sized, and large firms were all equally as likely to see access to finance as a minor or moderate obstacle.

Moreover, access to finance did not seem a major obstacle for firms before or after Covid-19 across geographic regions in Egypt. Figure 1b shows that for firms surveyed before Covid-19 and in the Greater Cairo and West Delta regions, access to finance was overwhelmingly seen as a minor or moderate obstacle. Among firms surveyed before Covid-19 and in Northern Upper Egypt and Southern Upper Egypt, less than a fifth saw access to finance as a minor obstacle, and nearly half of the firms cited access to finance as a moderate or major obstacle; this also roughly held for the Suez Region and the Middle and East Delta. Among firms surveyed after the onset of Covid-19, and in the Middle East and Delta region, nearly half cited access to finance as only a minor obstacle when surveyed after the pandemic, compared to only a fifth sharing the sentiment when surveyed before the pandemic. Firms in the Northern Upper Egypt region showed some improvements along the same lines, while firms in the Southern Upper Egypt region were much more likely to cite access to finance as a moderate obstacle when surveyed after the pandemic than before the pandemic. In general, perceptions of access to finance seemed to have improved in most regions, except for the Suez region, where perceptions of access to finance seemed to have worsened, with nearly a fifth of firms surveyed after the pandemic in the region seeing access to finance as a very severe obstacle.

For medium-sized and large firms, the median share of total annual sales paid for after delivery for firms surveyed after the onset of Covid-19 was larger than the median share for firms surveyed before the onset of Covid-19. For small firms, the medians in both time periods were fairly similar. Moreover, for small and medium-sized firms, the median share of working capital borrowed from banks for firms surveyed before the onset of the pandemic was similar to that for firms surveyed after the onset of the pandemic. For large firms, however, the median share for firms surveyed after the pandemic was nearly 10% higher than for those surveyed before the pandemic.

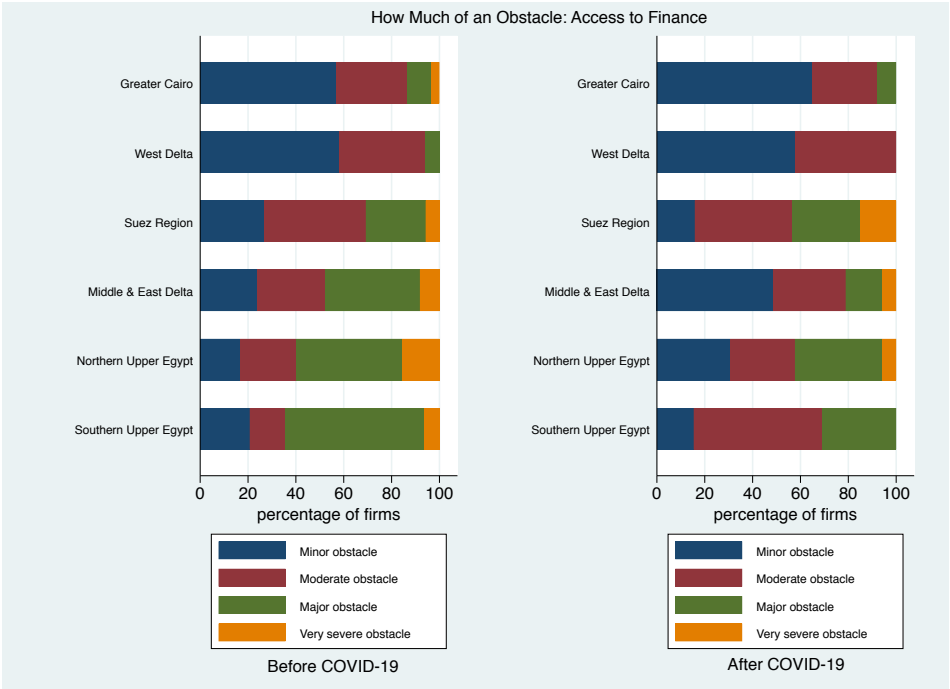
2 The World Bank Enterprise Surveys covered a total of 3,075 firms between December 2019 and July 2020 in Egypt. The survey covered seven regions in Egypt: Greater Cairo, West Delta, Suez Region, Middle and East Delta, Northern Upper Egypt, Southern Upper Egypt. It spanned firms from 15 industries: Food and Beverages; Textiles and Garments; Leather products; Chemicals and Chemical products; Petroleum products, Plastics and Rubber; Non-metallic mineral products; Basic Metals and Metal products; Machinery, Equipment, Electronics, and Vehicles; Wood products Furniture, Paper, and Publishing; Other Manufacturing; Construction; Wholesale; Retail and Automotive trade; and Hospitality and Tourism. Also, it represented small (5-19 employees), medium-sized (20-99 employees), large (100 or more employees) firms.

FIGURE 1A ACCESS TO FINANCE AS AN OBSTACLE, BY FIRM SIZE



Source: Author's calculations using World Bank Enterprise Surveys data.

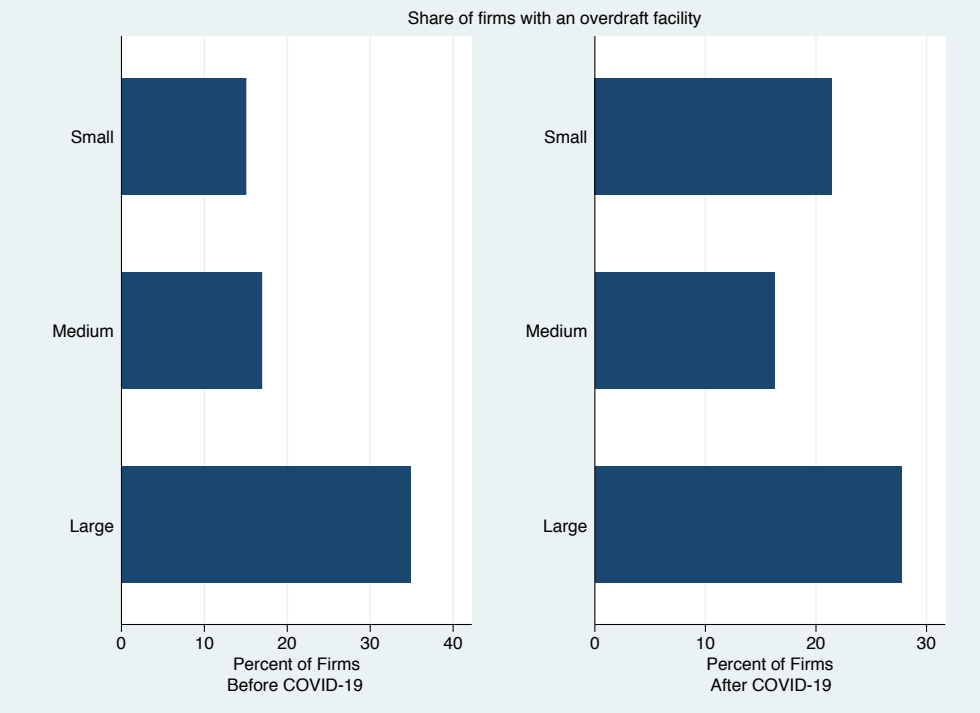
FIGURE 1B ACCESS TO FINANCE AS AN OBSTACLE, BY REGION



Source: Author's calculations using World Bank Enterprise Surveys data.

Most firms, regardless of location and time of survey, reported not having a loan or line of credit because the firm did not apply for one, not because its last application was turned down. This result did not change when dividing firms by industry or size groups. Moreover, prior to the onset of Covid-19, large firms were more likely than medium-sized firms to have overdraft facilities and, in turn, medium-sized firms were more likely than small firms to have overdraft facilities. After the onset of Covid-19, however, the share of firms having overdraft facilities increased among all firm-size groups (Figure 2).

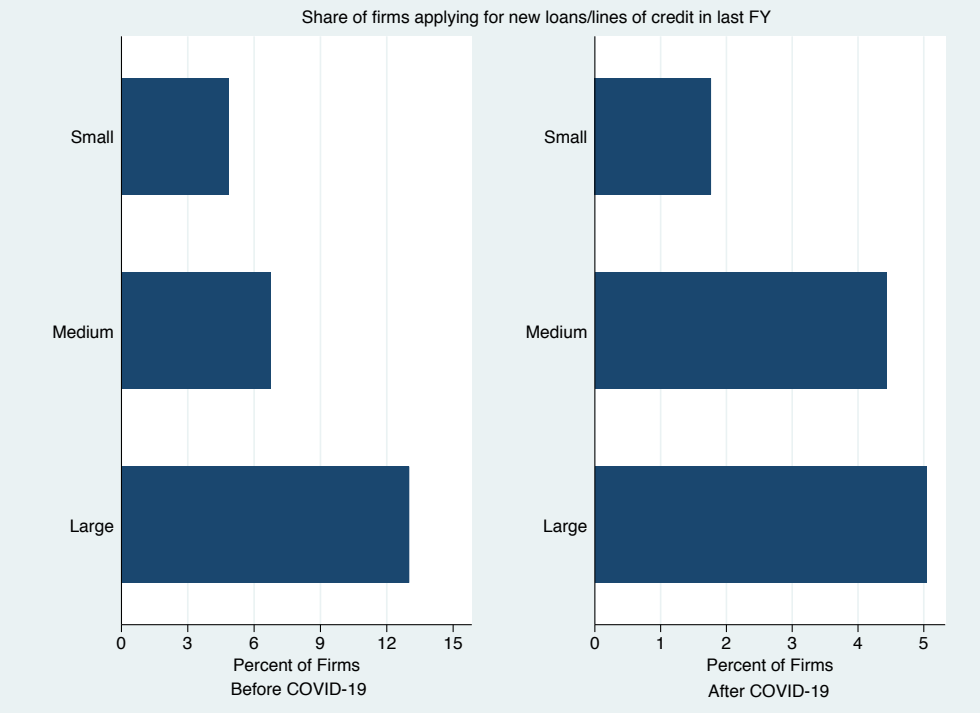
FIGURE 2 SHARE OF FIRMS WITH AN OVERDRAFT FACILITY



Source: Author's calculations using World Bank Enterprise Surveys data.

Regardless of firm size, the share of firms applying for new loans or lines of credit prior to the onset of the pandemic appeared to be modest. In general, large firms seemed to be more likely to apply for new loans and lines of credit than medium-sized firms and, in turn, medium-sized firms were more likely to apply than small firms. This pattern loosely held post-pandemic, with medium-sized firms more likely to apply for loans and new lines of credit than small firms, but equally as likely to apply as large firms (Figure 3). Most firms, regardless of size, cite the lack of need for a loan as the main reason for not applying for a new one. This sentiment held for firms surveyed before and after the onset of the pandemic.

FIGURE 3 SHARE OF FIRMS APPLYING FOR NEW LOANS/LINES OF CREDIT IN LAST FINANCIAL YEAR



Source: Author's calculations using World Bank Enterprise Surveys data.

The above statistics show that firms did not appear to experience hurdles in access to finance due to Covid-19. It is worth exploring how key international financial institutions may have contributed to this by providing financial support to Egypt. The next section looks at contributions made to Egypt by the European Bank for Reconstruction and Development (EBRD), the World Bank, and the IMF during 2020 following the pandemic.

THE CONTRIBUTION OF INTERNATIONAL FINANCIAL INSTITUTIONS

Various international financial institutions supported Egypt during the pandemic. The EBRD supported the real economy in Egypt with a US$200 million financing package to Banque Misr for trade and for on-lending to small and medium-sized enterprises (SMEs) and private businesses impacted by the Covid-19 crisis. Under this facility, the EBRD provided a $100 million loan to enable Banque Misr to provide short-term financing to private SMEs facing liquidity constraints due to a decrease in their activities and turnover caused by the Covid-19 crunch. The EBRD has increased the existing trade finance limit to Banque Misr by $100 million under the EBRD's Trade Facilitation Programme (TFP), in order to meet the increased demand for import and export transactions. This financing

package was under the EBRD's Coronavirus Solidarity Package, established to meet immediate short-term financing needs to private businesses through existing EBRD partner banks.

In May 2020, the IMF provided an emergency financial assistance of $2.772 billion to Egypt under its Rapid Financing Instrument (RFI) to meet the urgent balance of payments needs stemming from the outbreak of the Covid-19 pandemic. The aim of the RFI was to help alleviate some of the most pressing financing needs, including for spending on health, social protection, and supporting the most impacted sectors and vulnerable groups. This emergency support helped limit the decline in international reserves and provides financing to the budget for targeted and temporary spending, aimed at containing and mitigating the economic impact of the pandemic. Then, Egypt also committed to full transparency and accountability on crisis-related spending including through publishing information on procurement plans and awarded contracts, as well as ex-post audits of such spending.

In addition, the International Finance Corporation (IFC) of the World Bank has extended a total of $400 million since March 2020 to support the private sector, including small and medium-sized enterprises and the health sector in Egypt. In addition, it cooperated with Egypt's Financial Regulatory Authority to issue Egypt's first of its kind green bonds. Moreover, the IFC invested a total of $307 million in Egypt during the year ending in June 2020.

The support of international financial institutions was necessary. But without complementary efforts by local policymakers, the support would not have been channelled to the real economy. The next section presents the roles that were played by the Egyptian Ministry of Finance and the Central Bank of Egypt during the pandemic.

THE ROLE OF FISCAL POLICY

The Egyptian Ministry of Finance (MoF) dedicated the fiscal year 2020/21 budget to achieving sustainable and inclusive growth while fostering human development and implementing wide-ranging structural reforms. The MoF put out a budget that was characterised by an unprecedented set of measures and a stimulus package of 100 billion Egyptian pounds (EGP), considered the largest in the history of Egypt and greater in size and measures than the package implemented in 2008/09 to face the global financial crisis. The 2020/21 stimulus package aimed to provide financial support to citizens and sectors negatively affected by the Covid-19 crisis.

In light of the challenges of Covid-19, the MoF, with the support of all national authorities, sought to capitalise on the gains of the economic reform programme undergone between 2016 and 2019. These gains allowed the fiscal space and structural flexibility to better cope with the current crisis. Although the timing of 2020/21 budget preparation coincided with the spread of the Covid-19 pandemic around the world, the programme set forth

comprehensive measures to safeguard citizens, productive industries and exporters and help them overcome the crisis with the least damage in a way that enables our economy to recover rapidly.

The 2020/21 budget allocated EGP 100 billion to support the adopted comprehensive presidential plan aiming to combat the pandemic with ways to alleviate the burden on affected industries and ease the financial burden on less advantaged citizens. The Ministry of Finance announced in early May 2020 that EGP 63 billion of the 100 billion had already been allocated to cover some urgent additional social support, health and non-health expenditures, incentives to productive industries, and tax incentives. It also added additional 142,000 households to social pension and the Takaful and Karama programmes that served around 3.6 million. In addition, it allocated monthly disbursements of EGP 500 for three months, for a total of EGP 1,500, to support irregular workers. It also increased payments to women community leaders in rural areas from EGP 350 to EGP 900 per month.

Tax incentives and cost reductions have also played a key role. The 2020/21 budget increased the tax exemption limit from EGP 8,000 to EGP 15,000 annually. Employees of third parties earning an annual income of EGP 24,000 or below also received an EGP 9,000 personal tax exemption. Additionally, a new low-value (2.5%) tax bracket was introduced for those with annual income below EGP 30,000 instead of 10%.

The MoF also reduced the price of natural gas for industry to $4.5 per million thermal units to reduce factories' production costs, and reduced electricity prices for industry for the high, medium and high voltage by 10 piasters per kilowatt to reach EGP 1.08 per kilowatt. Moreover, it launched an EGP 50 billion fund for real estate financing for middle-income citizens directed at real estate financing through banks at a 10% return rate.

It is worth noting that the gains of the comprehensive economic reform programme that began in 2016 have not only allowed fiscal space and structural flexibility in the state budget, but have also increased the trust of financial institutions in Egypt's ability to overcome the crisis, which ultimately resulted in the positive credit rating given to Egypt. The MoF is now focusing on the digital transformation of budgeting, tax and customs collections and has taken a set of reform measures. In addition, it reduced the tax burden on the affected sectors by making a settlement of the tax arrears due on the investors in exchange for paying only 1–5% of the value of the tax arrears. The MoF also pumped EGP 3 billion during the period from April to June 2020 to support the Export Development Fund in providing additional liquidity to exporters. Moreover, the MoF increased public spending by an additional EGP 10 billion to pay the dues of contractors and suppliers.

THE ROLE OF MONETARY POLICY

The Central Bank of Egypt (CBE) implemented policies to reduce the financial impact of Covid-19 in Egypt. These policies included decreasing interest rates, offering the necessary credit limits to finance imports, delaying credit dues, limiting cash transactions, providing ATMs, launching an electronic acceptance initiative, supporting the replacement and renovation of hotels, financing the payroll for workers in the tourism industry and maintenance and operating expenses for six months, supporting financially stressed companies and individuals, and financing private sector firms.

The CBE lowered the overnight deposit rate, the overnight lending rate, the rate of the main operation, and the discount rate by 300 basis points to 9.25%, 10.25%, 9.75%, and 9.75%, respectively, in March 2020. The CBE reduced these rates by another 50 basis points in September 2020 and by a further 50 basis points in November 2020. Moreover, the CBE reduced the interest rates to 8% from 10% percent for (1) mortgage finance for the middle-income class; (2) industrial, agricultural, and construction private sectors initiatives; and (3) tourism sector initiatives to support financing the replacement and renovation of hotels, floating hotels and touristic transport fleets, and financing working capital and salaries. In doing so, the CBE aimed to support all sectors within the economy that were disrupted by Covid-19.

In addition, the CBE requested all banks to provide the necessary credit limits to finance imports of strategic commodities, with a special focus on food commodities to cater for the market needs. It also studied and followed-up on the sectors most affected by the Covid-19 outbreak and developed plans to support the companies operating in those sectors. Moreover, it offered necessary credit limits to finance working capital, particularly for the payment of salaries for companies' employees.

The CBE delayed all credit dues for all individuals, small and medium-sized enterprises, and corporations for a period of six months. These credit dues included retail loans as well as mortgage loans. In addition to delaying these credit dues, debtors were exempted from late interest or additional fees for late payments. As the period of deferring all customers' credit dues came to an end in September 2020 with no extension, and with the aim of supporting clients whose cash flows were negatively affected by the pandemic, banks have been guided by the CBE to (1) put the appropriate procedures in place to deal with all clients based on their ability to repay their debts and their cash flows; (2) restructure clients' debts to achieve a structure that matches their current ability to repay through offering several alternatives, with special attention to clients whose activities were affected during the previous period; (3) not consider debt restructuring as a significant increase in a client's credit risk, if the client has started to repay regularly without having financial difficulties; and (4) study and analyse the overall risks associated with the current crisis, conduct stress tests to determine the impact of the crisis on credit portfolios, and develop plans to deal with any potential losses.

Moreover, the CBE set measures to limit cash transactions and facilitate the usage of electronic payment methods. Starting in March 2020, it cancelled fees and commissions related to point-of-sale (POS) systems and cash withdrawal from ATMs and E-wallets for a period of six months. In September 2020, the CBE extended the cancellation of these fees and commissions until the end of 2020. In addition, it exempted local transfers in local currency from all commission and expenses between March and December 2020 in order to limit the use of cash transactions. Moreover, it directed banks to develop their infrastructure and to enhance their transfers departments to avoid delays and execute local transfers in local currency on the same day. The CBE also launched an 'electronic acceptance initiative' to increase the number of electronic points of acceptance available in all governorates. This initiative benefited companies and merchants who did not have POS systems. And, in light of some of the difficulties faced by citizens in cash deposit and withdrawal operations in Egypt and the need to increase the number of ATMs and ensure their proper geographical distribution across governorates to reduce the burden placed on citizens and branches of banks operating in Egypt, the CBE launched an initiative to distribute around 6,500 ATMs (as an initial stage) divided across a number of banks according to each bank's number of clients to ensure that they provide proper services to them.

The CBE provided EGP 50 billion at an interest rate of 8% over a period of 15 years to support the replacement and renovation of hotels, floating hotels and touristic transport fleets. Under this initiative, the CBE also allowed banks to finance salaries and dues to suppliers as well as maintenance expenses through granting credit facilities for a maximum period of two years, with a grace period till the end of December 2021, and capitalising the interest rate over this period.

Moreover, the CBE supported financially stressed companies and individuals. It supported companies that had bad and doubtful debts with a credit scoring of 9 or 10 and an outstanding debt balance of less than EGP 10 million, whether legal procedures were taken against them or not. If companies paid a percentage of their outstanding debt in cash or in-kind (subject to the bank's approval) according to the agreed-upon conditions with the bank and their cashflow, the CBE requested banks to (1) remove these companies from the non-performing loans list; (2) waive of all current and exchanged legal cases; and (3) release all guarantees that were held to secure the debt. Also, it supported the individuals that had a total outstanding debt with all banks of less than EGP 1 million. The CBE requested banks to (2) waive all current and exchanged legal cases; and (2) lift the ban on dealing with these clients and release the guarantees securing those debts when the client paid 50% of the net outstanding debt balance without the marginal interest during the period until 31 March 2021.

Last but not least, the CBE allocated EGP 100 billion through banks at an interest rate of 8% to finance other private sectors. This included industrial corporates and companies operating in agriculture, in addition to agricultural production and manufacturing, including export and packaging stations for agricultural commodities, refrigerators

as well as fisheries, poultry, livestock, with an annual turnover of EGP 50 million or more (taking into account the total consolidated annual turnover of the client and its related parties). The initiative aimed to grant credit facilities to finance the purchase of raw materials, production supplies, machinery and equipment, and production lines (i.e. capital expenditures), in addition to workers' salaries and other utilities expenses. Construction companies with an annual turnover of EGP 50 million or more can now benefit from this initiative.

CONCLUDING REMARKS

The Covid-19 pandemic is causing the most severe global health and economic crisis for at least seven decades. In Egypt, the disruptions caused by the pandemic started in early 2020 and have interrupted a period of macroeconomic stability, characterised by relatively high growth, improved fiscal accounts, and a comfortable level of foreign reserves. The fiscal and monetary policies implemented during the first half of 2020, along with the emergency support provided by international financial institutions, are so far helping Egypt weather the shock.

This chapter has focused on highlighting these policy measures as well as how firms perceived their ease of access to finance before and after Covid-19 in 2020. More analysis is needed to understand how firms can expand and create higher quality jobs in Egypt in the face of the pandemic in the days ahead.

REFERENCES

Djankov, S (2020) "Reviving tourism in the Covid era: bungs, tax cuts and no more tour buses" LSE Blog.

Djankov, S, and U Panizza (2020), *Covid-19 in Developing Economies*, CEPR Press.

Nonvide, G (2020), "Policy for limiting the poverty impact of Covid-19 in Africa," in S Djankov, and U Panizza (eds), *Covid-19 in Developing Economies*, CEPR Press.

ABOUT THE AUTHOR

Jamal Ibrahim Haidar is an assistant professor of economics at the American University in Cairo (AUC) and a Research Associate at the Middle East Initiative, Harvard University.

CEPR PRESS

With the exception of some flashpoints in Northern and Southern Africa, the continent has so far been largely spared from the direct health effect of the Covid-19 pandemic. However, the African economy has been significantly hurt by the economic consequences of Covid-19, which piled on other ongoing calamities such as the locust crisis devasting crops across the continent. This eBook focuses on business and household responses to the Covid-19 crisis in Africa, as well as access to international finance, patterns in international borrowing, and country-specific experiences during the pandemic. The chapters feature the ongoing research work of about 40 economists.

Economies in the African continent are heavily dependent on commodity exports, foreign direct investment, remittances, as well as tourism – a sector which has been devastated by the pandemic and is unlikely to recover quickly. While several vaccines are starting to be commercialised and distributed globally, Africa faces uncertainty over the logistical and financing challenges associated with a large vaccination campaign. Recent estimates suggest that the continent will be responsible for nearly one-third of the global increase in extreme poverty associated with the pandemic. The political ramifications of Covid-19 will largely depend on the ability of governments to contain the virus and its socioeconomic fallout. The politics of dealing with such discontent is a fascinating new piece of the Covid recovery puzzle in Africa.

ISBN: 978-1-912179-41-1

ISBN 978-1-912179-41-1
9 781912 179411

33 Great Sutton Street | LONDON EC1V ODX | UK
TEL: +44 (0)20 7183 8801 | FAX: +44 (0)20 7183 8820
EMAIL: CEPR@CEPR.ORG
WWW.CEPR.ORG