MENA Crisis Tracker – 2/14/2022

The MENA Crisis Tracker is a weekly newsletter that provides information on public health indicators, expected economy-wide losses, and social consequences of the ongoing COVID-19 crisis in the Middle East and North Africa. COVID-19's spread, fatality, and economic costs are particularly difficult to ascertain when testing is far from universal. Data transparency is key to facilitate context-specific policy responses, which require tradeoffs between public health outcomes and socio-economic conditions in the short run. But publicly available data must be interpreted with caution because testing is far from universal. In addition to presenting COVID-19 related indicators with caveats, the Tracker provides links to publicly available research on the economics of the pandemic and potential policy responses.

Highlights from this edition[1]:

- **Missing Data Alert**: In the absence of universal testing, general mortality rates during 2021 can be compared to pre-pandemic mortality as a proxy for the public health consequences of the pandemic. Unfortunately, MENA countries do not offer publicly available data on deaths.
- High-income MENA countries lead in testing per capita – see Public Health Tracker. Testing data for Algeria, Yemen, and Syria has been updated using Worldometer data, but WB staff cannot corroborate the information using official government sources. Many MENA countries have positivity rates above the WHO's recommendation of 5% or lower.
- The Tracker presents information on vaccination efforts across MENA. Also presented is a scatter plot showing the positive correlation of vaccination rates by level of GDP per Capita, and how MENA countries' vaccination efforts are progressing compared with countries of similar levels of GDP per Capita. See the last section under Public Health Tracker.
- Global evidence indicates that testing per person tends to rise with income per capita, after controlling for population size and the quality of public health systems. This finding confirms that developing economies are at a disadvantage relative to rich countries. See What Is Correlated with Testing per Capita.
- Expected macroeconomic gains due to the post-pandemic recovery reached 0.6% of MENA's 2020 GDP for 2022 as of February 11, 2022, relative to the 2020 pandemic impact year. The expected GDP losses are highest for Yemen, with an expected accumulated loss in 2022 equivalent to 1.4% of its 2020 GDP. See Macroeconomic Impacts.
- The economic losses have increased poverty relative to the counterfactual scenario without the crisis. Yet estimates of increases in the number of poor people might be underestimated. See Poverty and Social Costs.
- In four MENA countries, food prices have risen by more than 20 percent since February 14th, 2020. See Insights from the MENA Welfare Observatory.

[1] The editor for this edition is Christina Wood, Senior Economist, Office of the Chief Economist for MENA. Excellent data assistance provided by Rana Lotfi. Our thanks to Minh Cong Nguyen for providing the poverty estimates in Table 8, and to Ifeanyi Nzegwu Edochie for providing the food prices heat map (Figure 5). This work is a product of World Bank staff using external data. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work.

- Insights from Academia includes a new paper that assesses the unequal impacts of the pandemic recession on sectors and firms.

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I. Public Health Tracker

Under the hypothetical of universal testing, the spread of the virus is measured by the number of COVID-19 cases per capita, and its fatality rate is tracked by the number of deaths per capita. Given that the incidence of testing around the world and in MENA is far from universal, indicators of the spread are neither strictly reliable nor comparable across countries. In fact, it is likely that countries with more widespread testing will present higher rates of spread and fatality. Hence the degree of testing itself must be tracked to put the indicators of the spread and deaths in perspective. Testing is tracked by two indicators: the number of tests per capita and the test positivity rate (number of positive cases over total tests) which tends to decline with the incidence of testing. Table 1 provides a summary of the indicators and their caveats.

Table 1: Summary of Public Health Indicators

	Indicator	Caveats
Testing	Tests per capita	Testing data is sparse for some economies
	Test positivity rate (number of positive cases over total tests)	Emerging rule-of-thumb: Test-positivity rate should be below 5 percent
Spread	Number of COVID-19 cases per capita	Testing is not universal; many cases may be missed
Fatality	Deaths due to COVID-19 per capita	COVID-19 deaths may be misattributed, or at-home deaths may be missed; deaths may be underestimated

Missing data alert: Given that testing is not universal, an arguably more trustworthy indicator of the fatality rate is the difference between total deaths reported during the spread and pre-pandemic mortality trends. Currently, most MENA countries do not provide readily accessible historical or recent data on the number of deaths (due to any cause). This alone indicates that MENA faces a transparency challenge.

Another caveat to keep in mind is that each country may be at a different stage of the pandemic. A country may seem to be faring better than another, although at the peak of the outbreak it may suffer more. Without universal testing, the true spread of the virus can only be understood by random population testing.[1][2] Notably, reported numbers are susceptible to selection bias, since it is common for only those with symptoms to be tested. Random population testing has only been undertaken in a few places. In New York State, random testing of 3000 individuals revealed that 14 percent were carriers of the COVID-19 antibody as of April 23.[3] In Indiana, random population

[1] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7138654/

[2] https://www.medrxiv.org/content/10.1101/2020.04.09.20059360v2

[3] https://www.reuters.com/article/us-health-coronavirus-usa-new-york-idUSKCN2252WN

testing in April suggested that the virus had a 2.8% prevalence rate in the state, implying that for every officially reported case of COVID-19, 10 cases were unreported.[4] In a state in southern Brazil, a program was launched to randomly test 18,000 people. A significant upward trend was observed over the course of three surveys, with an increase in seroprevalence from 0.135% in the first round to 0.222% in the third during the early days since the arrival of the virus in southern Brazil. [5]

In the MENA Region, few studies have tried to assess the seroprevalence of antibodies against SARS-CoV-2. In Al-Madinah, Saudi Arabia, after studying samples from 1,212 healthy blood donors between mid-May and mid-July, 2020, a study showed a seroprevalence of 19.3%.[6] In Iran, and based on a larger sample size of 8,902 individuals, random testing conducted between April and June 2020 showed a seropositivity rate of 17.1%.[7] A second study conducted in Iran's Guilan province during April 2020, based on 551 individuals, exposed an even higher seroprevalence of 22%.[8] However, it is important to notice that seropositivity rates may largely vary depending on the population and the surrounding circumstances. In Jordan, after studying 746 healthy blood donors living under strict lockdown measures between January and June 2020, it was found that none of the individuals carried COVID-19 antibodies. Still, it is possible that the spread of the virus could be much higher than reported by official statistics.

News Highlights:

- Palestinian authorities step up COVID measures as hospitals fill up
- UAE begins to ease COVID-related restrictions starting Feb 15

[4] https://www.medrxiv.org/content/10.1101/2020.04.09.20059360v2

[5] https://www.nature.com/articles/s41591-020-0992-3

[6] https://www.sciencedirect.com/science/article/pii/S1319562X20306641

[7] https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30858-6/fulltext

[8] https://www.medrxiv.org/content/10.1101/2020.04.26.20079244v1

The information below covers data for the date ending: February 14, 2022.

1. Testing as of February 14, 2022.

Table 2 presents each country's tests per million of population and the test-positivity rate. Test positivity rates have improved slightly in a few countries yet remained largely unchanged in most countries since January 2021. Last week showed no change in test positivity rate of the MENA average (6%), with four countries having slight increases to their individual positivity rate compared to the previous week. A low test-positivity rate in cases of low tests per million, or a high test-positivity rate, suggests that testing is selective and insufficient relative to the spread of the disease.

Based on last week's data, Arabian gulf countries continue to lead the region in terms of having the highest tests per million in the region, particularly the UAE (13,045,095), Bahrain (5,096,230) and Oman (4,702,455). These three, joined by Saudi Arabia and Yemen, also have the lowest test-positivity rates, which are below the 5% recommended by the WHO.

Three countries, Syria, Algeria and Yemen, have consistently lacked reliable testing data over the course of the pandemic, have not been providing official updates, and have low tests per million. While the Worldometer database occasionally has updated testing data for these three countries, World Bank staff are unable to corroborate this data from the Worldometer database using official, government sources.

Oman has not released new testing data since September 13th, 2021, Egypt has not released new testing data since September 20th, 2021, Lebanon has not released new testing data since November 22nd, 2021, Morocco has not released, January 17th, 2022 and West Bank and Gaza has no new testing data since February 7th, 2022.

Table 2. COVID-19 Tests per Million of Population as of February 14, 2022

Country	Tests/1M	Total Tests	Tests last week	Cases/Tests
United Arab Emirates	13,045,095	131,541,154	3,392,790	1
Bahrain	5,096,230	9,158,089	192,731	5
Oman	4,702,455	25,000,000	0	1
Kuwait	1,670,636	7,305,105	194,501	8
Jordan	1,499,501	15,545,166	473,035	9
Qatar	1,190,198	3,341,845	19,283	10
Saudi Arabia	1,106,752	39,500,111	821,887	2
Lebanon	707,729	4,795,578	0	21
West Bank and Gaza	581,627	3,078,533	0	18
Iran	530,800	45,505,835	811,491	15
Iraq	425,247	17,724,506	153,419	13
Tunisia	350,033	4,206,888	75,254	23
Libya	333,446	2,341,565	65,174	20
Morocco	298,715	11,237,010	0	10
Djibouti	275,726	278,820	2,511	6
Egypt*	35,024	3,693,367	0	12
Yemen*	8,588	265,253	0	4
Syria*	8,042	146,269	0	36
Algeria*	5,115	230,861	0	113
MENA Region	**707,834**	**324,895,955**	**6,202,076**	**6**

Source: Authors' calculations based on data from Worldometer (https://www.worldometers.info/coronavirus/). Color coordination done as follows: 0-5% Green, 6-10% Yellow, 11-19% Orange, 20% + Red. "-" means data is not currently available. Countries should aim to be below the 5 percent test positivity rate threshold, according to a May 12th advisory statement by the World Health Organization. * = World Bank staff have not been able to corroborate the data reported in the Worldometer database.

2. Spread of COVID-19 as of February 14, 2022

Table 3 presents the number of reported COVID-19 cases per million of population, cases in the past week and percentage change in cases last week compared to the preceding week. Bahrain (258,095), Lebanon (150,013), Jordan (141,639) and Kuwait (137,516) have the highest number of COVID cases per million. Three of these countries, Bahrain, Lebanon and Kuwait, posted percentage decreases in weekly cases (-18%, -21% and -43% respectively), while Jordan posted a low percentage increase in weekly cases (14%).

In countries with ongoing conflicts such as Iraq, Libya, Syria, and Yemen, weak testing capacity could often lead to fewer reported positive cases and paint a potentially misleading picture of low spread. Nonetheless this week's data points to increasing spread compared with the previous week

in Syria (46%) and Yemen (104%), while Libya (-19%) and Iraq (-39%) reported decreases in positive weekly cases. Eleven other countries have posted percentage decreases in weekly cases, ranging from -3% in Iran to -59% in Djibouti, signaling the waning of the omicron wave.

Table 3. Total Cases per Million Population as of February 14, 2022

Country	Cases/1M	Total Cases	Cases Last Week	Cases last week relative to previous week
Bahrain	258,095	463,805	42,724	-18%
Lebanon	150,013	1,016,487	44,713	-21%
Jordan	141,639	1,468,360	138,253	14%
Kuwait	137,516	601,307	22,488	-43%
Qatar	124,938	350,801	5,178	-35%
West Bank and Gaza	105,038	555,961	26,522	-43%
United Arab Emirates	86,104	868,237	10,580	-28%
Tunisia	80,463	967,052	22,877	-47%
Iran	79,391	6,806,265	226,999	-3%
Oman	68,788	365,700	13,513	-14%
Libya	66,974	470,314	20,196	-19%
Iraq	54,596	2,275,571	27,372	-39%
Morocco	30,708	1,155,165	7,922	-50%
Saudi Arabia	20,409	728,387	19,490	-25%
Djibouti	15,362	15,534	24	-59%
Algeria	5,800	261,752	3,776	-48%
Egypt	4,294	452,821	13,170	-17%
Syria	2,900	52,751	836	46%
Yemen	378	11,671	505	104%
MENA Region	**41,150**	**18,887,941**	**647,138**	**-16%**

Source: Authors' calculations based on data from Worldometer (https://www.worldometers.info/coronavirus/). Color coordination done as follows: Any % decrease is Green, 0-24% increase is Yellow, 25-49% increase is Orange, 50%+ is Red.

3. COVID-19 Fatality as of February 14, 2022

Table 4 shows the deaths per million of population, and the last week's percentage change in deaths relative to the preceding week. A limitation of this measure is that it may underreport deaths by not counting deaths that occur at home, or by misattributing COVID-19 deaths to other causes. Due to either case, the numbers reported may be underestimates. Tunisia (2,256 per million of population) has the highest rate in the region, followed by Iran (1,560) and Lebanon (1,452). Six countries posted percentage declines in covid-related weekly deaths – Libya, Kuwait, Morocco,

Qatar, the UAE, Egypt and Syria—ranging from -3% to -43%. Eight countries had low-to-moderately high increases in deaths per million population, ranging from 4% in Algeria to 48% in Jordan, while four countries had elevated increases in deaths per million—Iran (119%), West Bank and Gaza (72%), Bahrain (300%) and Yemen (341%), the latter two being from a relatively low base. Djibouti again had no covid-related deaths during the week.

Table 4. COVID-19 Fatality Rate – Deaths/Million population as of February 14, 2022

Country	Deaths/1M	Total Deaths	Deaths last week	Deaths last week relative to previous week
Tunisia	2,256	27,119	440	3%
Iran	1,560	133,718	888	119%
Lebanon	1,452	9,840	129	7%
Jordan	1,303	13,508	188	48%
West Bank and Gaza	947	5,014	117	72%
Libya	872	6,125	58	-3%
Bahrain	794	1,427	16	300%
Oman	792	4,208	36	24%
Iraq	593	24,704	188	34%
Kuwait	576	2,520	10	-29%
Morocco	420	15,781	188	-19%
Saudi Arabia	251	8,973	19	6%
Qatar	234	656	4	-43%
United Arab Emirates	227	2,285	21	-13%
Egypt	221	23,292	356	7%
Djibouti	187	189	0	-
Syria	167	3,029	21	-5%
Algeria	149	6,729	83	4%
Yemen	68	2,103	75	341%
MENA Region	**634**	**291,220**	**2,837**	**33%**

Source: Authors' calculations based on data from Worldometer (https://www.worldometers.info/coronavirus/). Color coordination done as follows: Any % decrease is Green, 0-24% increase is Yellow, 25-49% increase is Orange, 50%+ is Red. "—" indicates not applicable due to change from 0 cases the previous week.

4. COVID-19 Vaccinations as of February 14, 2022

Countries in the MENA region have mixed performances regarding the vaccine rollout in 2021-22. Arabian Gulf countries such as the UAE, Qatar, and Kuwait lead the region in the percent of the population vaccinated at 94.1%, 75.7%, and 75.4%, respectively (Table 5).

Data on vaccine doses administered has been inconsistent across the region. While most MENA countries have been consistently updating their vaccination numbers, other countries have been slow to release updated figures.

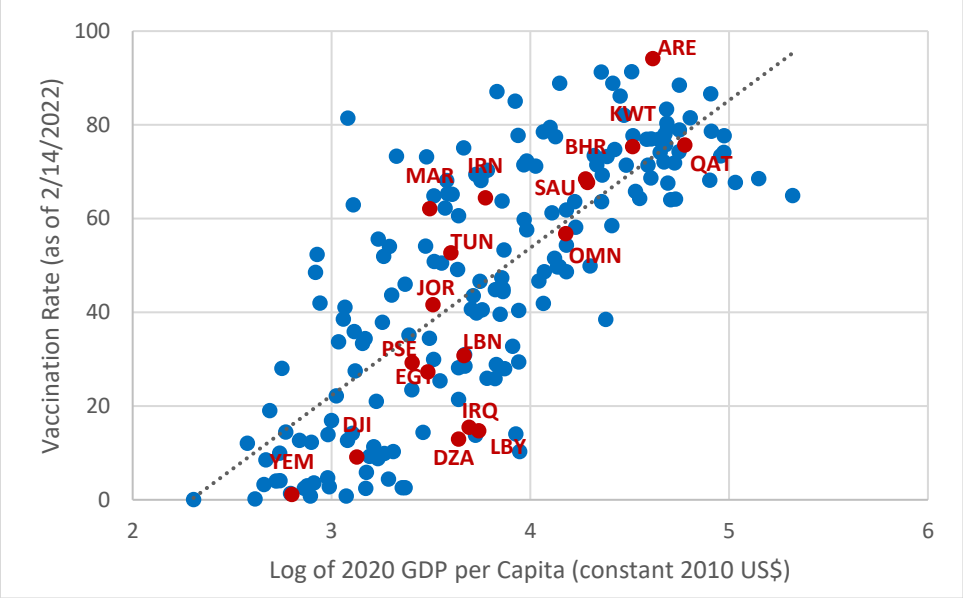
MENA vaccination performance compared to income peers varies. In Figure 1, after plotting the rate of fully vaccinated people against Log of 2020 GDP per Capita (constant 2010 US$), developing MENA countries such as Egypt, Algeria and FCV countries fall behind global peers, while GCC perform better than global peers, except for Oman and Qatar. Furthermore, Morocco, Iran, Tunisia and Jordan are doing relatively well compared to their income peers.

Table 5. COVID-19 Vaccinations as of February 14, 2022

Country	% of population vaccinated	Cumulative COVID-19 vaccine doses administered	Known Bilateral Vaccine Contracts	Vaccine clinical trial participation (Y/N)	Vaccine imports through COVAX Facility (Y/N)
Algeria	13.0%	12.97 million by January 9th	15.55m doses: Sputnik V, SII, and Sinovac	N	Y
Bahrain	68.5%	3.38 million by February 9th	3m doses: Pfizer/BioNTech, Sinopharm, AstraZeneca	Y	y
Djibouti	9.1%	151,713 by February 6th	100k doses: Sinovac	N	Y
Egypt	27.3%	67.21 million by February 6th	95m doses: Sinopharm, Sputnik-V, Pfizer/BioNTech, SII	Y	Y
Iran	64.5%	137.66 million by February 13th	159.9m doses: Sputnik V, Bharat, SII, Sinopharm	Y	y
Iraq	15.5%	15.77 million by February 1st	6.5m doses: Pfizer/BioNTech, AstraZeneca, Sinopharm, Sputnik-V, SII	N	Y
Jordan	41.6%	9.33 million by February 6th	11.5m doses: Pfizer/BioNTech, AstraZeneca, Sputnik-V, Sinopharm	Y	Y
Kuwait	75.4%	7.37 million by February 7th	6m doses: Pfizer/BioNTech, SII, Moderna	N	Y
Lebanon	30.8%	5.04 million by February 14th	1m from Sputnik-V	N	Y
Libya	14.7%	3.12 million by February 6th	4.86m from: J&J, Sputnik-V, Sinopharm	N	Y
Morocco	62.1%	52.60 million by February 6th	67.87m from: – Sinopharm, SII,AstraZeneca, Pfizer/BioNTech, Sputnik-V	Y	Y
Oman	56.8%	6.60 million by January 31st	4.87m doses from: Pfizer/BioNTech, Sinovac	N	Y
Qatar	75.7%	6.08 million by February 12th	n/a	N	Y
Saudi Arabia	67.7%	59.51 million by February 13th	23m doses from: Pfizer/BioNTech, SII, Moderna	Y	Y
Syria	5.1%	2.97 million by January 15th	n/a	N	Y
Tunisia	52.7%	12.87 million by February 12th	500k doses from: Sputnik	Y	Y
UAE	94.1%	23.85 million by February 13th	3.2m doses from: Sinopharm and SII	Y	Y
West Bank & Gaza	29.3%	3.43 million by January 10th	6.03m doses from: Pfizer and SII	N	Y
Yemen	1.2%	758,480 by February 7th	n/a	N	Y

Source: Data on vaccination from Our World in Data (https://ourworldindata.org/covid-vaccinations); data on vaccine contracts is from the IMF-WHO COVID-19 Vaccine Tracker (https://www.imf.org/en/Topics/imf-and-covid19/IMF-WHO-COVID-19-Vaccine-Tracker); and data on vaccine clinical trials is from https://covid19.trackvaccines.org/data-sources/. The 10 vaccines that have been approved by the WHO for emergency use are Pfizer-BioNTech, Novavax, Serum Institute of India (SII), Moderna, Johnson and Johnson (J&J), Oxford/AstraZeneca, Bharat Biotech, Sinopharm, and Sinovac. The Sputnik-V vaccine, yet to be approved by WHO, has been approved at the national level in more than 70 countries (https://www.statista.com/statistics/1123927/sputnik-v-exports-from-russia-by-country/).

Figure 1: Vaccination Rate and GDP per Capita: MENA vs Income Peers as of February 14, 2022



Sources: Vaccination Rate from Our World In Data ((https://www.worldometers.info/coronavirus/), *People Fully Vaccinated per Hundred*, latest rate as of 1/24/2022. *GDP per Capita (constant 2010 US$)* from World Bank Development Indicators (WDI).
Note: Sample includes 194 countries (of which 18 in MENA).
GDP per capita is for year 2020, except for the UAE, Kuwait, Oman, Bermuda, Cuba, Cayman Islands, Japan, Monaco, Nauru, San Marino and Tonga for year 2019, and Djibouti, Yemen, Aruba, Faeroe Islands, Greenland, Isle of Man, Liechtenstein, South Sudan, Turks and Caicos Islands, Venezuela for years 2010 to 2018.

II. What Is Correlated with Testing per Capita?

Using data on testing as of January 24, 2022 (the latest available) we can draw some insights about the correlates of testing across countries. The regression results reported in Table 6 and Figure 2 below show that countries that are richer, have better health security and capabilities, or are smaller, tend to test more per capita. The regional fixed effects (not presented in Table 6) show that South Asia has the largest coefficient, followed by the Gulf Cooperation Countries group, then Europe and Central Asia. These are the only regions with statistically significant coefficients relative to East Asia and the Pacific. The conclusion is that richer countries test more, but there are no scale effects from being a larger economy. Arabian gulf countries on average appear to have more testing per capita than countries from other regions apart from South Asia after controlling for population size and GDP per capita.

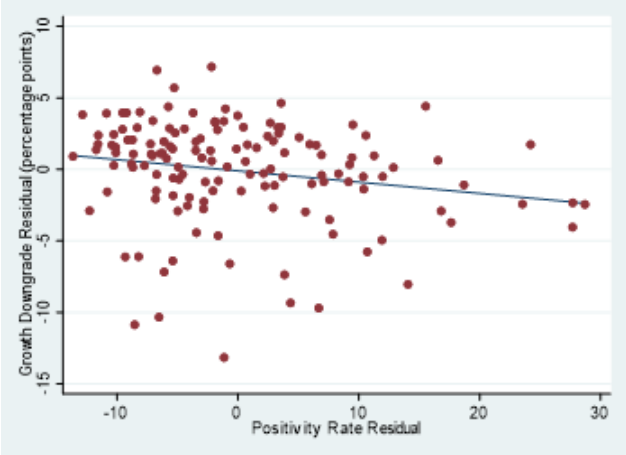
Table 6. Correlates of Testing per Capita – Scale vs. Per Capita Income

Model	**OLS**		
Outcome Variable	**Log of Tests per Million of Population (as of January 24, 2022)**		
	(1)	**(2)**	**(3)**
Log of GDP per capita (constant 2010 US$), 2018	0.737***	0.726***	0.598***
	(0.085)	(0.087)	(0.086)
Log of Population, 2018	-0.276***	-0.296***	-0.301***
	(0.060)	(0.065)	(0.055)
Global Health Security Index, 2019	0.033***	0.033***	0.030***
	(0.010)	(0.010)	(0.010)
Days since the 100th case (January 23, 2022)		0.001	0.000
		(0.001)	(0.001)
Constant	9.452***	9.282***	10.828***
	(1.196)	(1.188)	(1.065)
Region Fixed Effects	NO	NO	YES
Number of observations	162	162	162
Adjusted R2	0.737	0.737	0.770

note: *** p<0.01, ** p<0.05, * p<0.1, Robust Standard Errors. East Asia & Pacific omitted.

The downward trendline in Figure 2 that demonstrates the relationship between change in growth forecasts and total test positivity rate reveals a negative correlation between the two variables. Using a global sample for which data is available, regression results indicate that, even after controlling for log of GDP, tourism, and trade, a higher test positivity rate means a lower GDP growth forecast. As reported in Table 6, countries that are more developed tend to have higher incidences of testing. Figure 2 also shows that countries that have maintained a low overall test positivity rate are likely to have a higher growth forecast.

Figure 2: Change in Forecasts October '20 - October '19 vs Total Positivity Rates (Cases/Tests %)



Note: Y axis is the difference in growth projections (using IMF WEO data) for year 2020, October 2020 minus October 2019. The X axis is the total positivity rate is a percentage calculated by dividing total number of cases by total number of tests (using Worldometer data). Sample includes all countries for which data is available.

On the right, we introduce several control variables: log of GDP per capita in 2019 (in USD, October 2020 WEO), total trade value in GDP in 2019 (percent), days since first positive case until Nov. 30, 2020 (JHU), and tourism as a % of export in 2018 (WDI).

	Growth Downgrade (Oct 2020 minus Oct 2019)	
	[1]	[2]
Total positivity rate as of Dec 7, 2020	-0.0309	-0.0786***
	-0.0337	-0.0277
Log of GDP per capita in 2019		-1.583***
		-0.458
Tourism (% of exports in 2018)		-0.126***
		-0.0187
Trade (% of GDP in 2019)		-0.0055
		-0.0045
Days from the first confirmed case as Nov 30		-0.0038
		-0.0067
Constant	-9.072***	1.296
	-0.614	-1.726
Observations	139	139
R-square	0.00413	0.389

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

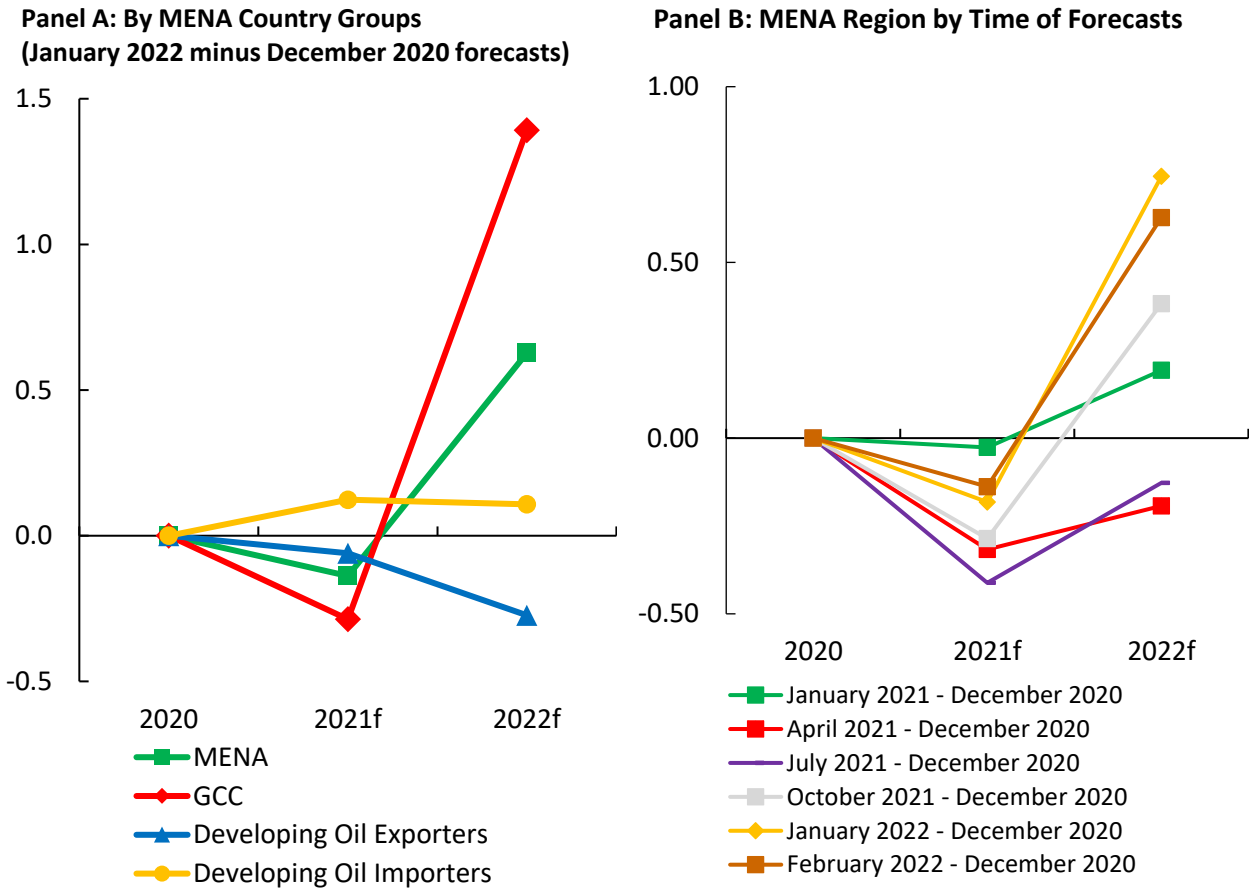
III. Macroeconomic Impacts

Updated consensus growth forecasts by the private sector were released on February 8th, 2022, containing information available through February 6th, 2022. We compute the effect of the pandemic and associated global economic trends on the level of economic activity (GDP) as the change in growth for 2021 plus the impact of the changes in growth forecasts for 2022. We find that MENA's forecast 2022 GDP level reflects an expected rebound of 0.6 of a percentage point on average relative to the 2022 forecast of December 2020 (see Panel A of Figure 3).

The largest GDP-level rebound in 2022 relative to the 2022 forecast of December 2020 is seen in the forecasts for the GCC (1.4 percentage points higher than what was implied by the forecasts of December 2020), followed by Developing Oil Importers (0.1 of a percentage point), and Developing Oil Exporters facing a projected downgrade in 2022 relative to 2020 (-0.3 of a percentage point). These GDP-level changes can be interpreted as the expected macroeconomic impact of the COVID-19 pandemic and commodity price changes as a percentage of MENA's 2020 GDP.

Relative to 2020, the expected GDP losses for 2021 are low (-0.1 percentage points), signaling the beginnings of a turnaround in economic performance toward pre-covid levels. In addition, the GDP levels in 2022 are rebounding although unevenly across the region (Panel B of Figure 3). The 2021 GDP level changes for MENA, using the baseline December 2020 forecasts, was -0.2 percentage points in January 2022, and -0.1 percentage points in February 2022. Amid a general improving trend, on average, of private sector forecasters' views of the impact of the crisis following 2020, the slight downgrade in the January GDP forecast reflects forecasters' concerns about implications of the new COVID Omicron variant, a concern that the February GDP forecast suggests is easing. In 2022, the GDP level upgrade for MENA, compared to the December 2020 forecasts as a baseline, was 0.7 percentage points in January 2022 and 0.6 p.p. in February 2022. These reflect significant improvements relative to the 2022 forecasts made in previous months.

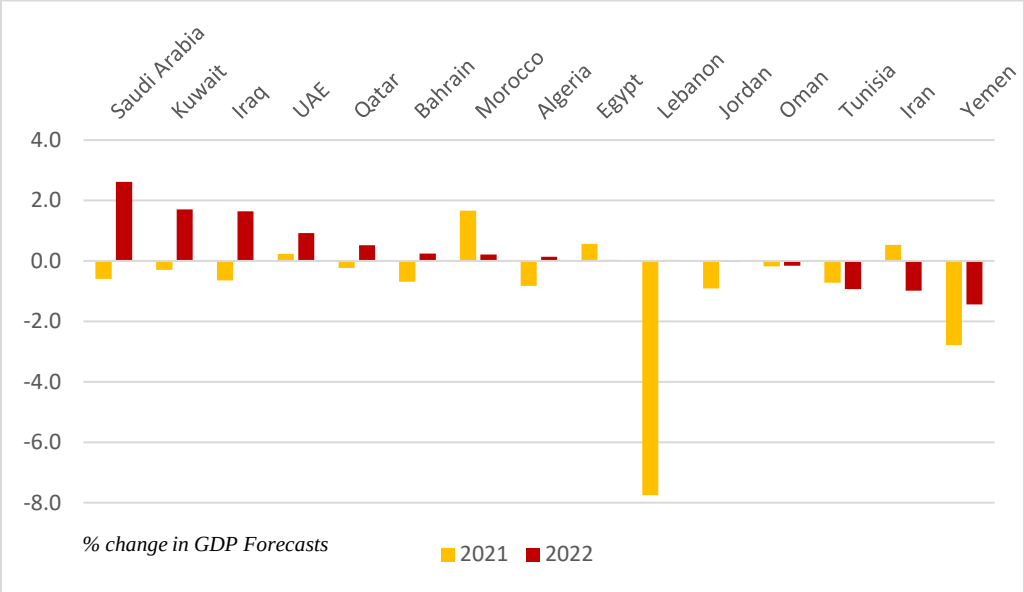
Figure 3. Uneven Recovery Relative to the 2020 Pandemic Impact: The Expected GDP Losses of the Crisis



Sources: World Bank Staff calculations based on data from Focus Economics.
Notes: "*GCC"* includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and UAE. "*Developing Oil Exporters*" includes Algeria, Iran, Iraq, and Yemen. "*Developing Oil Importers"* includes Egypt, Jordan, Lebanon, Morocco, and Tunisia. "*MENA*" includes countries in all three groups. Data for Egypt correspond to its fiscal year, running from July 1 to June 30 in Egypt.

Figure 4 presents expected GDP-level changes by various private sector forecasters for each country. The 2022 GDP-level forecasts for a few of the countries were still downgraded, though now better off than the 2021 GDP-level forecasts computed in December 2020. Lebanon has the largest downgrade for 2021. Figure 4 also reveals that the estimated GDP losses during 2021 are expected to be recovered during 2022 for four GCC countries. For the other of MENA countries, the forecast GDPs for 2022 reflect persisting recessions.

Figure 4. Recovery Relative to the 2020 Pandemic Impact: Expected GDP-Level Changes of the Crisis by Country in 2021 and 2022



Source: World Bank Staff calculations based on data from Focus Economics. Note: Data for Egypt corresponds to fiscal years (July 2020 - June 2021, and July 2021 - June 2022) not calendar years, which makes it not comparable to the data from other countries.

IV. Poverty and Social Costs

The crisis shock will increase poverty in 2021. The uncertainty of the magnitude of the economic shock caused by the pandemic, as well as the uncertainty of the distribution of its effects on household per capita consumption, imply that any estimate of the expected percent changes in poverty due to the pandemic relies on restrictive assumptions. Tables 7 and 8 present alternative estimates of expected percent changes in poverty headcounts for 8 developing MENA economies. Both tables show estimated impacts of the pandemic by applying poverty-rate-to-growth elasticities to changes in GDP forecasts by Focus Economics. In both sets of estimates, the elasticities are based on the assumption that the economic shock is "inequality-neutral," which means that they rely on the assumption that all households are impacted by a constant proportion of the GDP shock equal to 0.85, which is known as the "pass-through rate."

Table 7 uses a common elasticity for the eight MENA countries at each poverty threshold, which is the median elasticity for the sample of MENA countries listed in the table at each poverty line. These elasticities were estimated with pre-crisis data by Mahler, Lakner, Aguilar and Wu (2020).[2] In contrast, the estimates reported in Table 8 allow for the poverty-to-GDP elasticities to vary across countries as well as across poverty thresholds. These estimates were provided to the Tracker by the World Bank's MENA Poverty team.

Lastly, please note that if a country has negligible pre-crisis poverty rates at low poverty-line thresholds, the absolute change in poverty rates (the number of poor people as a share of the population) can also be negligible. This is the case of Lebanon in Tables 7 and 8.

[2] The median MENA regional inequality-neutral elasticity for the international poverty rate ($1.9 in 2011 PPP) is -4.8, for the lower middle-income poverty rate ($3.2 in 2011 PPP) is -3.3, and for upper middle-income poverty rate ($5.5 in 2011 PPP) is -2.3. All these MENA-specific elasticities are larger in absolute values than median elasticities for the world as provided by World Bank Economist, Daniel Mahler of the Development Economics Data Group (DECDG) on May 1, 2020. The median global elasticities are lower: -1.4 for the $1.9 threshold (1.4% decline in $1.90 headcount ratio per 1% increase in GDP), the median elasticity for $3.2 is -1.2, and the median elasticity for $5.5 is -0.9.

Table 7. Estimates of Increases in Poverty Headcounts due to the Crisis based on Private-Sector Growth Forecasts as of February 2022 and Median MENA Poverty Elasticities (percentage of pre-crisis poverty rates)

Country	Change in Forecasts (%)	% Change in Poverty Rates Due to the Crisis GDP Losses		
		International poverty rate ($1.9 in 2011 PPP)	Lower middle-income poverty rate ($3.2 in 2011 PPP)	Upper middle-income poverty rate ($5.5 in 2011 PPP)
	2022	2022	2022	2022
Algeria	2.5	-12.2	-8.4	-5.8
Egypt	5.2	-24.8	-17.0	-11.9
Iran	3.9	-18.9	-13.0	-9.1
Iraq	4.8	-22.9	-15.7	-11.0
Jordan	2.8	-13.4	-9.2	-6.4
Lebanon	1.9	-8.9	-6.1	-4.3
Morocco	4.4	-16.6	-11.4	-8.0
Tunisia	2.6	-21.3	-14.7	-10.2

Source: MNACE Staff calculations based on data from Focus Economics and poverty-GDP elasticities by Daniel Mahler (World Bank, DECDG). The median MENA regional inequality-neutral elasticity for the international poverty rate ($1.9 in 2011 PPP) is -4.8, for the lower middle-income poverty rate ($3.2 in 2011 PPP) is -3.3, and for upper middle-income poverty rate ($5.5 in 2011 PPP) is -2.3. * indicates that pre-crisis poverty rates at the indicated thresholds were estimated at zero. Forecasts for Egypt are based on data from its fiscal year of 2021, which runs from July 1st, 2020 to June 30, 2021.

As mentioned, the estimates of the impact of the crisis on the number of poor people presented in Tables 7 and 8 rely on the weak assumption that the impact is "inequality neutral." Yet, it is likely that some individuals or households will be more severely affected than others. Across the region, those at risk of falling into poverty are probably self-employed, informal sector workers who lack social protection, and individuals working in sectors directly hit by the COVID-19 crisis. Migrant workers—for example in GCC countries—are excluded from safety nets available to citizens. In addition, the crisis is affecting some industries more than others, which implies that the economic risk of individuals depends on their sector of employment. For example, hard-hit sectors include tourism, retail, textile, and garment industries, which are particularly salient for the economies of Lebanon, Tunisia, Morocco, and Egypt. Individuals whose livelihoods are tied to these sectors are probably at a higher risk of falling into poverty. Thus, the estimates of the expected increases in the number of poor people need to be interpreted with a grain of salt. But it suffices to say that poverty is expected to rise, possibly by large numbers.

Table 8. Estimates of Increases in Poverty Headcounts due to the Crisis based on Private-Sector Growth Forecasts as of February 2022 using Varying Elasticities (percentage of pre-crisis poverty rates)

	Change in forecasts (%)	% Change in Poverty Headcount Due to Expected GDP Losses from the Crisis		
Country	2022	International poverty rate ($1.9 in 2011 PPP)	International poverty rate ($3.2 in 2011 PPP)	International poverty rate ($5.5 in 2011 PPP)
Algeria	2.5	-10.9	-16.7	-9.5
Egypt	5.2	-5.6	-1.9	0.8
Iran	3.9	-44.9	-42.8	-32.3
Iraq	4.8	25.8	19.0	8.9
Jordan	2.8	-58.5	-45.4	-37.5
Lebanon	1.9	0.0	-	86.2
Morocco	4.4	-15.1	-13.4	-7.9
Tunisia	2.6	-7.5	-4.6	-3.4

Source: World Bank Staff calculations based on data from Focus Economics and varying poverty-GDP elasticities. "—" indicates that pre-crisis poverty rates at the indicated thresholds were estimated at zero.[3]

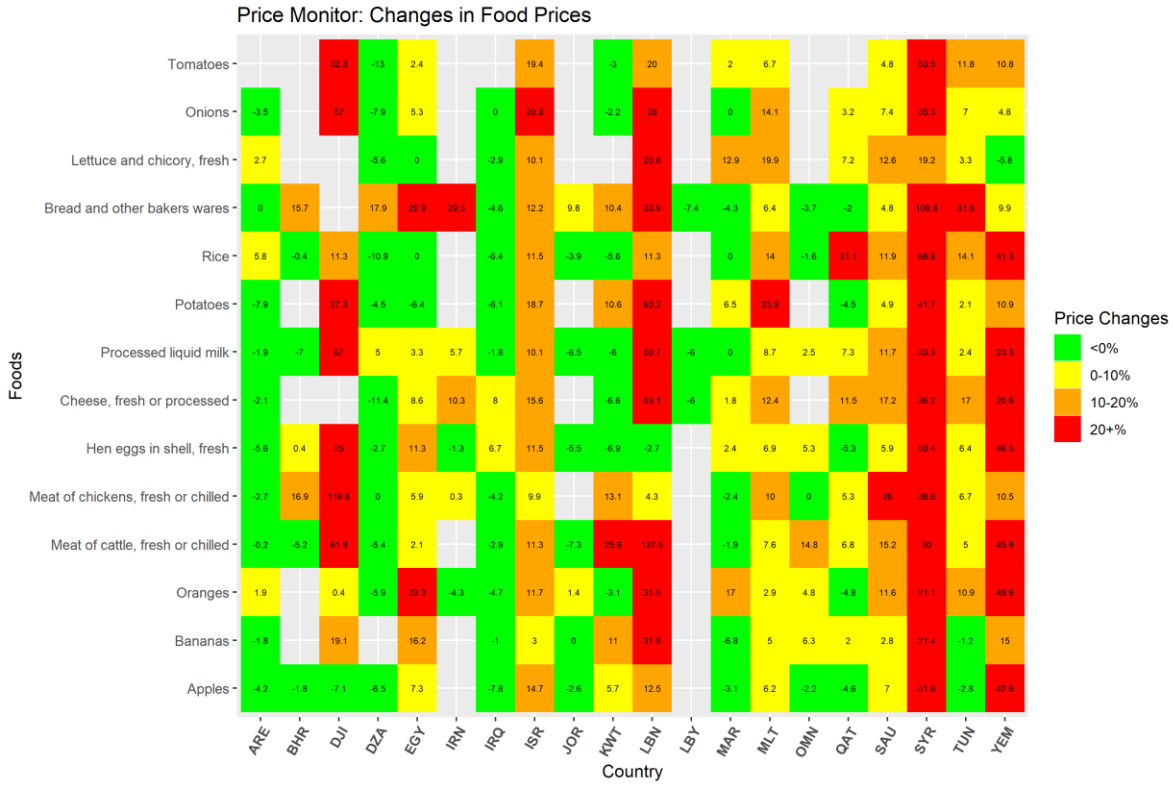
[3] The estimates of the increase in the number of poor people relative to the counterfactual scenario of no crisis are based on simulations. The results are sensitive to the pre-Covid distribution of household consumption per capita. In the case of Lebanon, the original data come from the 2011/2012 household survey. The poverty rates since then were estimated by applying a pass through of GDP per capita growth to household per capita consumption, assuming that all households were affected by the same proportion -- the inequality-neutral shock assumption. Earlier this month, the revised 2011 purchasing power parities data (released in May 2020 from the International Comparison Program (ICP)) was updated in the poverty calculation. The result was that measured poverty in 2011 and all subsequent years were estimated to be lower than previously thought. More importantly, the distribution of per capita consumption at the bottom tail (low levels of per capita consumption) is flat, and thus the poverty elasticity with respect to GDP shocks also fell. This explains why the current estimates in Table 8 for Lebanon and other countries are lower than those previously reported in this Tracker.

V. Insights from the MENA Welfare Observatory (Poverty Team)

1. Food Price Changes

COVID-19 poses considerable risks to already vulnerable populations. One of these risks come from rising food prices, which have come under stress due to breakdowns in global supply chains. Food-price inflation is assessed here by analyzing changes in food prices since February 2020 (prior to COVID-19) across the MENA region, for five food categories: carbohydrates, diary, fruits, meats, and vegetables. Across the region food prices have been rising (see Figure 5). In most countries price changes have been modest (increasing 5% or less or declining less than 5%); but in Djibouti, Lebanon, Syria, and Yemen prices of most staples have increased by more than 20 percent between February 14, 2020 and February 14, 2022. Since food expenditures tend to account for a large share of poor households' consumption relative to rich households, food inflation tends to be regressive.

Figure 5: Food Price Changes between February 14, 2020 and as of February 14, 2022



Note: WB staff calculations based on food price data from the FAO.

VI. Insights from Academia

1. Economic Winners Versus Losers and the Unequal Pandemic Recession
   By Fernando Cirelli & Mark Gertler

   As is well known, during the pandemic recession firms directly exposed to the virus, i.e. the "contact" sector, contracted sharply and recovered slowly relative to the rest of the economy. Less understood is how firms that "won" by offering safer substitutes for contact sector goods have affected this unequal downturn. Using both firm and industry data, the authors first construct disaggregated measures of revenue growth that distinguish between contact sector losers, contact sector winners, and the non-contact sector. They show that contact sector losers contracted roughly fifty percent more than the sector average, while winners grew. Further, forecast data suggests that the gap between winners and losers will persist at least through 2022. To explain this evidence, they then develop a simple three sector New Keynesian model with (i) a sector of firms that offers safe substitutes for risky contact sector goods and (ii) learning by doing. Overall, the model captures the unequal sectoral recession. It also accounts for inflation, including the sharp runup in 2021.

2. E-commerce During Covid: Stylized Facts from 47 Economies
   By Joel Alcedo, Alberto Cavallo, Bricklin Dwyer, Prachi Mishra & Antonio Spilimbergo

   The paper assesses e-commerce across 47 economies and 26 industries during the COVID-19 pandemic using aggregated and anonymized transaction-level data from Mastercard, scaled to represent total consumer spending. The share of online transactions in total consumption increased more in economies with higher pre-pandemic e-commerce shares, exacerbating the digital divide across economies. Overall, the latest data suggest that these spikes in online spending shares are dissipating at the aggregate level, though there is variation across industries. In particular, the share of online spending in professional services and recreation has fallen below its pre-pandemic trend, but we observe a longer-lasting shift to digital in retail and restaurants.

3. Firm Closures and Performance in A Time of Pandemic in Egypt
   By Amirah El-Haddad and Chahir Zaki

   The analysis uses data from the 2020/21 Egyptian Industrial Firm Behavior Survey (EIFBS) to assess the effects of the COVID-19 crisis on firm dynamics, behavior and performance. The results show that the crisis has hit the entire Egyptian manufacturing sector. But, in line with Schumpeter's (1934) creative destructive theory, the market shows signs of 'self-cleansing', whereby the less efficient are more likely to exit and downsize their activities. The descriptive results show resilience of larger, public, formal, and export sector firms. Thus, revealing pre-existing fragilities of the private, informal and, more generally the lower productivity firms in the manufacturing sector. The counter cyclicality of the relation implies that contraction of the formal sector expands the informal as the only alternative way to earn a living. As a 'survival sector', the informal sector has provided 'helping hand employment'.

Pre-crisis good managerial practices, innovation, the adoption of advanced technologies and training workers all provide an opportunity for firms to adapt their business model, as reflected by superior firm dynamics and post-crisis performance. Larger firms and mostly less vulnerable sectors such as fabricated metals and rubber have had more access to government support. It is likely that the government has chosen to support sectors with potentially better chances of survival rather than support the most vulnerable. Firms in pharmaceuticals were also recipients of support, which is sensible in a health crisis.

4. Inequalities in the Times of a Pandemic
   By Stefanie Stantcheva

   This paper summarizes the research on some of the major inequalities that have been exacerbated by the COVID-19 pandemic across OECD countries. It reviews findings related to inequalities across the income distribution, sectors and regions, gender, and inequalities in education inputs for children from different socioeconomic backgrounds.

5. The effects of COVID-19 vaccines on economic activity
   by Pragyan Deb, Davide Furceri, Daniel Jimenez, Siddharth Kothari, Jonathan D. Ostry & Nour Tawk

   This paper empirically examines the economic effects of COVID-19 vaccine rollouts using a cross-country daily database of vaccinations and high-frequency indicators of economic activity—nitrogen dioxide (NO2) emissions, carbon monoxide (CO) emissions, and Google mobility indices—for a sample of 46 countries over the period December 16, 2020 to June 20, 2021. Using surprises in vaccines administered, we find that an unexpected increase in vaccination per capita is associated with a significant increase in economic activity. We also find evidence for nonlinear effects of vaccines, with the marginal economic benefits being larger when vaccination rates are higher. Country-specific conditions play an important role, with lower economic gains if strict containment measures are in place or if the country is experiencing a severe outbreak. Finally, the results provide evidence of spillovers across borders, highlighting the importance of equitable access to vaccines across nations.

VII. Useful Resources for Information on COVID-19

COVID-19 & Government Response Trackers	Description	Link
World Bank	World Bank COVID-19 Operations Projects	https://www.worldbank.org/en/about/what-we-do/brief/world-bank-group-operational-response-COVID-19-coronavirus-projects-list
Worldometer	Daily updates of data on COVID-19 spread, fatalities, and testing per capita	https://www.worldometers.info/coronavirus/
Coronavirus News Tracker	Daily updates on COVID-19 media coverage including the levels of panic and misinformation	https://coronavirus.ravenpack.com/
WHO Tracker	Daily updates of new COVID-19 cases, total confirmed cases, and death totals	https://covid19.who.int/
Our World in Data	Visualization and downloadable data on daily COVID-19 statistics	https://ourworldindata.org/coronavirus
Bloomberg Live	COVID-19 visuals including global map of travel restrictions	https://www.bloomberg.com/graphics/2020-coronavirus-cases-world-map/
Johns Hopkins Coronavirus Research Center	COVID-19 totals of cases, deaths, and testing with visuals	https://coronavirus.jhu.edu/map.html
Financial Times Coronavirus Tracker	Visualization of COVID-19 daily deaths per country including government response stringency index	https://www.ft.com/coronavirus-latest
Oxford University	Government response Tracker	https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker
Ugo Gentilini (World Bank Social Protection Expert)	Social Protection Response to COVID-19	https://www.ugogentilini.net/

Worldwide Lockdown Dataset	Dataset of lockdowns by country	https://www.kaggle.com/jcyzag/covid19-lockdown-dates-by-country#countryLockdowndates.csv
IMF	Global Fiscal Support Monitor with a breakdown of country-specific fiscal responses to COVID-19	https://blogs.imf.org/2020/05/20/tracking-the-9-trillion-global-fiscal-support-to-fight-COVID-19/
The Guardian	COVID vaccine tracker: when will a coronavirus be ready?	https://www.theguardian.com/world/ng-interactive/2020/aug/31/covid-vaccine-tracker-when-will-a-coronavirus-vaccine-be-ready
Human Mobility Data	**Description**	**Link**
Cuebiq	Analysis of mobility and shelter in place analysis by tracking movement of its users through their devices (mostly US so far). Cuebiq maintains direct relationships with 80+ apps that reach a diverse base of anonymous, opted-in users, giving the ability to collect accurate and precise SDK location data at scale on a daily basis.	https://www.cuebiq.com/visitation-insights-covid19/
Facebook Disease Prevention Maps	Mobility patterns tracked using Facebook data	https://dataforgood.fb.com/tools/disease-prevention-maps/
Satellite Data (to capture COVID-19 effects)	**Description**	**Link**
ESA: Sentinel 5P	Air Pollution Maps	https://earth.esa.int/web/guest/missions/esa-eo-missions/sentinel-5p
NASA Goddard: Black Marble	Night Lights maps	https://blackmarble.gsfc.nasa.gov/#home

Social media and Crowd-sourced data	Description	Link
Premise	Custom questions as part of on-going micro-surveys, for example perceptions of social distancing measures, government support, livelihood impacts	https://www.premise.com/
Google Trends	High frequency data COVID-19 related searches	https://trends.google.com/trends/story/US_cu_4Rjdh3ABAABMHM_en
Waze	Crowd-sourced data on quarantine-related road closures, medical testing centers, and emergency food distribution centers	https://www.waze.com/covid19