



MENA Crisis Tracker – 5/9/2022

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 pandemic 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. Moreover, with the increased use of rapid antigen tests and at-home tests, publicly available data (which are based only on PCR tests) are of increasingly limited coverage and must be interpreted with even greater caution than previously. As vaccination opportunities are becoming ubiquitous and the risk COVID spread reduced, the share of the unvaccinated and information on hospitalizations have emerged as the key indicators of severity and potential spread of the disease. Furthermore, the number of fatalities has also declined dramatically and is no longer a relevant metric for most countries of the region. For these reasons, data on fatalities will cease to be presented as of May 23rd, joining discontinuance of data on testing and cases which became effective as of the March 23rd edition of the Tracker. 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 data may not be available (such as hospitalizations in all but Advanced Economies). 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 edition¹:

- **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 non-COVID deaths.
- High-income MENA countries lead in testing per capita – see [Public Health Tracker](#); nonetheless, testing data worldwide has become even less relevant for informing on severity and spread of the disease, due to the increasing use of rapid antigen tests and at home tests, neither of which are incorporated in the public testing data. For this reason, data on testing and COVID cases are no longer included in the Tracker, as signaled in recent Tracker editions.
- 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](#).
- Estimated macroeconomic gains due to the post-pandemic recovery reached 1.4% of MENA's 2020 GDP for 2022 as of April 5th, 2022, relative to the 2020 pandemic year levels. The 2022 estimated cumulative GDP losses are highest for Yemen, equivalent to 1.4% of its 2020 GDP. Trends in oil prices

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 5, and to Ifeanyi Nzagwu Edochie for providing the food prices heat map (Figure 6). 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.



and the purchasing managers' index provide early information on the drivers of macroeconomic performance. See [Macroeconomic Impacts](#).

- The economic losses have increased poverty relative to the counterfactual scenario without the crisis, although estimated increases 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](#).
- [Insights from Academia](#) includes a new [paper](#) that analyzes MENA corporate vulnerabilities in the wake of the pandemic.

Table of Contents

I. Public Health Tracker	3
II. Macroeconomic Impacts	9
III. Poverty and Social Costs	14
IV. Insights from the MENA Welfare Observatory (Poverty Team)	16
V. Insights from Academia	18
VII. Useful Resources for Information on COVID-19	20



I. Public Health Tracker²

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. As the reliability of these early indicators of spread has worsened further with the increased use of rapid antigen tests and home test, neither of which are incorporated in the public statistics, these indicators (of testing and case numbers) are no longer included, as signaled in previous editions of the Tracker. Data on fatalities, vaccination rates will continue to be covered.

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
Immunity	Vaccination rates (percent of the population vaccinated with full set of doses)	Vaccines may not be available, the vaccine delivery system could be constrained, or there may be vaccine hesitancy for some share of the population.

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. As vaccination opportunities are becoming ubiquitous, the share of the unvaccinated and information on hospitalizations have emerged as the key indicators of severity and spread of the disease. Yet data on hospitalization are currently only available for advanced economies. As the latter become available, they will be included in the Tracker.

² As the pandemic impact eases with the increase in vaccinations, the Tracker will evolve progressively away from public health indicators toward information on the economic recovery, and socio-economic responses and consequences. This change will increasingly be seen as of the February 28th Tracker edition, and data on testing and cases will be entirely discontinued as of the March 23rd edition of the Tracker.



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.^{3,4} 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 23.⁵ In Indiana, random population 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.⁶ 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 Brazil⁷.

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%.⁸ In Iran, 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%.⁹ A second study conducted in Iran's Guilan province during April 2020, based on 551 individuals, exposed an even higher seroprevalence of 22%.¹⁰ 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.

³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7138654/>

⁴ <https://www.medrxiv.org/content/10.1101/2020.04.09.20059360v2>

⁵ <https://www.reuters.com/article/us-health-coronavirus-usa-new-york-idUSKCN2252WN>

⁶ <https://www.medrxiv.org/content/10.1101/2020.04.09.20059360v2>

⁷ <https://www.nature.com/articles/s41591-020-0992-3>

⁸ <https://www.sciencedirect.com/science/article/pii/S1319562X20306641>

⁹ [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30858-6/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30858-6/fulltext)

¹⁰ <https://www.medrxiv.org/content/10.1101/2020.04.26.20079244v1>



News Highlights:

- ❖ [Iran](#) faces second year of big wheat imports after drought, says grain union
- ❖ [Egypt](#)'s core inflation at 11.9% in April vs 10.1% in March, central bank says.
- ❖ Growth in [Saudi](#) non-oil private sector still robust in April.
- ❖ [UAE's](#) non-oil private sector maintains solid growth in April.
- ❖ [Gulf](#) central banks raise rates as Fed hikes by 50 bps.
- ❖ IMF Commends [Morocco's](#) Effective Strategy to Mitigate COVID-19 Impact.
- ❖ Why 'Made in [Morocco](#)' Could Be Africa's Leading Automotive Label.

The information below covers data for the date ending: May 9, 2022.

For reasons noted in the opening paragraph of the Tracker, the sections on COVID testing and COVID cases have been discontinued.

1. COVID-19 Fatality as of May 9, 2022

Table 2 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 (2,371 per million of population) has the highest COVID mortality rate in the region, followed by Iran (1,642) and Lebanon (1,536). Tunisia, Iran, Iraq and Morocco posted percentage declines in covid-related weekly deaths, from already low levels, ranging from -6% to -75%. Saudi Arabia had elevated increases in deaths per million population of 50%, from a low base. Eleven countries reported no covid-related deaths during the week again. As reporting of deaths is phasing out in the region and elsewhere, the Tracker will provide the fatality data table for one more week.



Table 2. COVID-19 Fatality Rate – Deaths/Million population as of May 9, 2022

Country	Deaths/1M	Total Deaths	Deaths last week	Deaths last week relative to previous week
Tunisia	2,371	28,566	16	-6%
Iran	1,642	141,177	94	-13%
Lebanon	1,536	10,399	13	18%
Jordan	1,352	14,048	0	-
West Bank and Gaza	1,006	5,353	0	-
Libya	913	6,430	0	-
Bahrain	816	1,477	2	-
Oman	797	4,259	1	0%
Iraq	602	25,213	2	-67%
Kuwait	582	2,555	0	-
Morocco	426	16,070	1	-75%
Saudi Arabia	254	9,103	15	50%
Qatar	241	677	0	-
Egypt	232	24,613	0	-
United Arab Emirates	228	2,302	0	-
Djibouti	186	189	0	-
Syria	172	3,150	0	-
Algeria	152	6,875	0	-
Yemen	69	2,149	0	-
MENA Region	664	304,605	144	-8%

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.

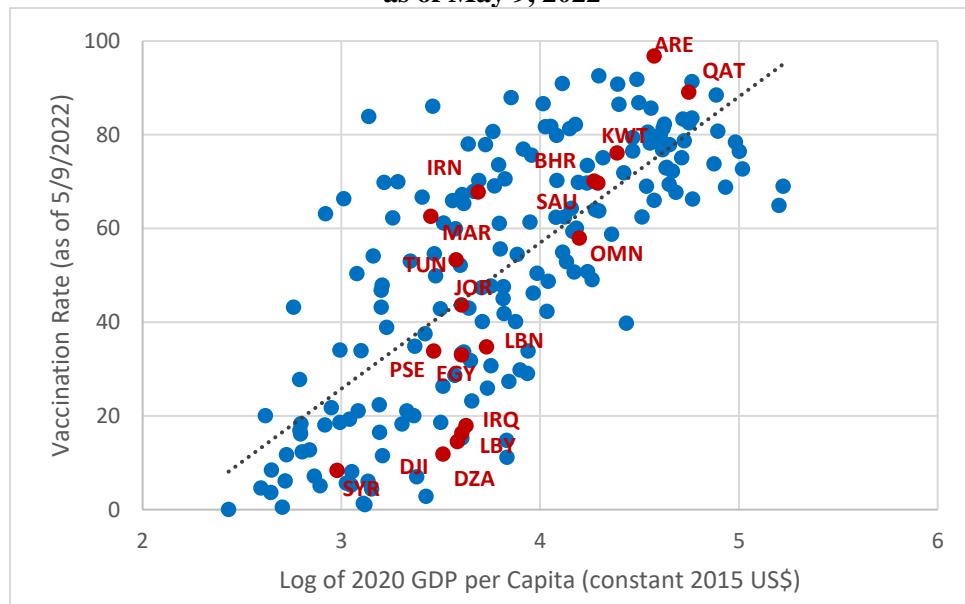


2. COVID-19 Vaccinations as of May 9, 2022

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 96.8%, 89.1%, and 76.2%, respectively (Table 3). 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 across countries. 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, Djibouti and FCV countries fall behind global peers, while GCC perform better than global peers, except for Oman. Furthermore, Morocco, Iran and Tunisia are doing relatively well compared to their income peers.

Figure 1: Vaccination Rate and GDP per Capita: MENA vs Income Peers as of May 9, 2022



Sources: Vaccination Rate from Our World In Data (<https://www.worldometers.info/coronavirus/>), *People Fully Vaccinated per Hundred*, latest rate as of 5/9/2022. *GDP per Capita (constant 2015 US\$)* from World Bank Development Indicators (WDI).

Note: Sample includes 196 countries (of which 19 in MENA)

GDP per capita is for year 2020, except for Syria, Greenland, Isle of Man and San Marino for year 2019, and Yemen, Aruba, Faroe Islands, Liechtenstein, New Caledonia and South Sudan for years 2010 to 2018.



Table 3. COVID-19 Vaccinations as of May 9, 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	14.5%	15.21 million by May 1 st	15.55m doses: Sputnik V, SII, and Sinovac	N	Y
Bahrain	69.7%	3.44 million by May 5 th	3m doses: Pfizer/BioNTech, Sinopharm, AstraZeneca	Y	Y
Djibouti	11.9%	179,909 by May 5 th	100k doses: Sinovac	N	Y
Egypt	33.0%	82.02 million by April 30 th	95m doses: Sinopharm, Sputnik-V, Pfizer/BioNTech, SII	Y	Y
Iran	67.8%	149.15 million by May 8 th	159.89m doses: Sputnik V, Bharat, SII, Sinopharm	Y	Y
Iraq	18.0%	18.12 million by May 4 th	6.5m doses: Pfizer/BioNTech, AstraZeneca, Sinopharm, Sputnik-V, SII	N	Y
Jordan	43.7%	9.90 million by May 5 th	11.5m doses: Pfizer/BioNTech, AstraZeneca, Sputnik-V, Sinopharm	Y	Y
Kuwait	76.2%	7.98 million by May 5 th	6m doses: Pfizer/BioNTech, SII, Moderna	N	Y
Lebanon	34.7%	5.60 million by April 25 th	1m from Sputnik-V	N	Y
Libya	16.4%	3.45 million by April 14 th	4.86m from: J&J, Sputnik-V, Sinopharm	N	Y
Morocco	62.6%	54.45 million by May 5 th	67.88m from: – Sinopharm, SII, AstraZeneca, Pfizer/BioNTech, Sputnik-V	Y	Y
Oman	58.0%	7.03 million by April 15 th	4.87m doses from: Pfizer/BioNTech, Sinovac	N	Y
Qatar	89.1%	6.77 million by May 8 th	n/a	N	Y
Saudi Arabia	70.1%	64.40 million by May 5 th	23m doses from: Pfizer/BioNTech, SII, Moderna	N	Y
Syria	8.4%	3.70 million by April 29 th	n/a	N	Y
Tunisia	53.4%	13.13 million by May 4 th	500k doses from: Sputnik	Y	Y
UAE	96.8%	24.71 million by May 8 th	3.2m doses from: Sinopharm and SII	Y	Y
West Bank & Gaza	33.9%	3.72 million by April 24 th	6.03m doses from: Pfizer and SII	N	Y
Yemen	1.4%	821,853 by April 19 th	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/trials-vaccines-by-country/#map_notes. 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/>).



II. Macroeconomic Impacts

This section provides updated consensus growth forecasts from Focus Economics, and updates on leading indicators that impact on macroeconomic performance, with differential effects depending on the country's economic structure. This edition includes an update of the oil price level and future trends. It also includes an update of the purchasing managers' index, which signals recovery or contraction of economic activity, for those countries for which such data is available.

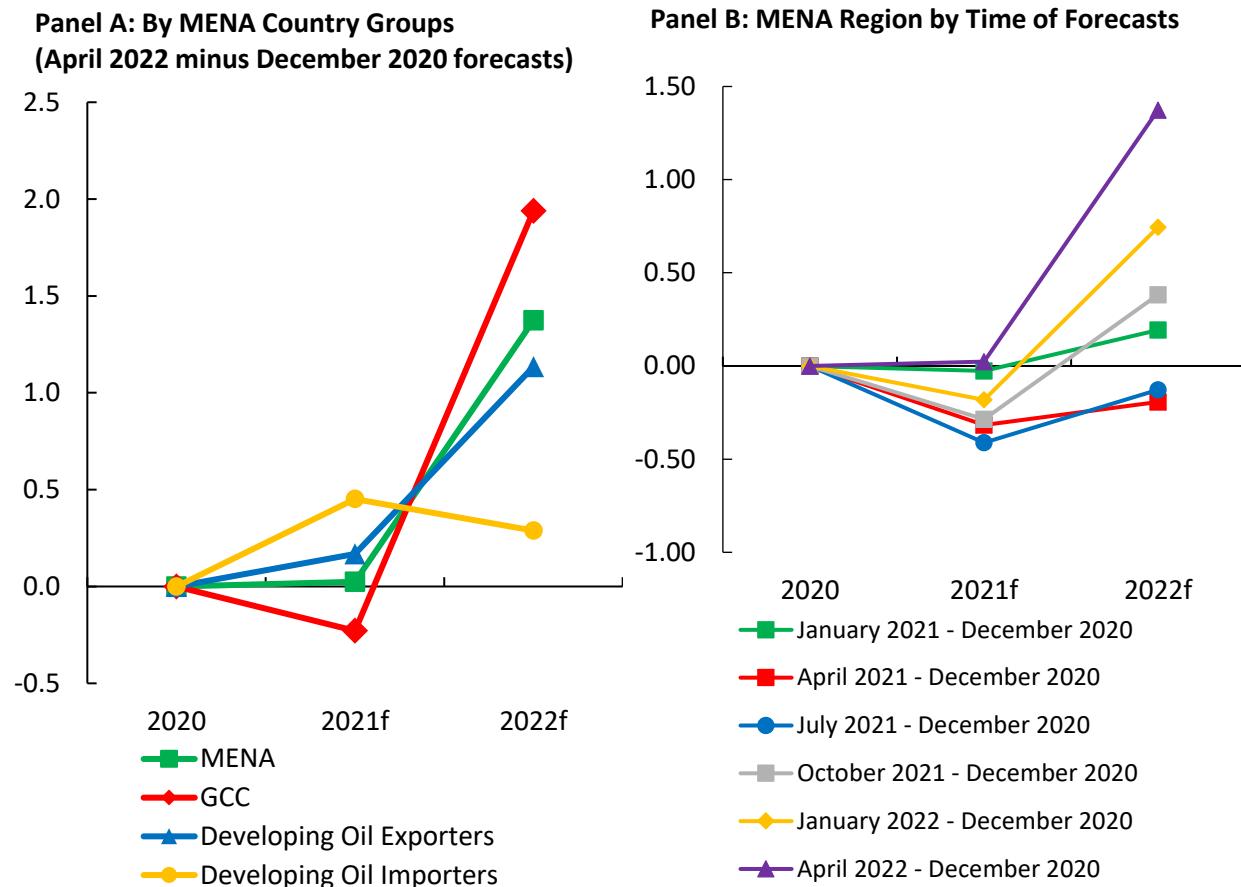
Updated consensus growth forecasts by the private sector were released on April 5th, 2022, containing information available through April 3rd, 2022. To assess the impact of the persisting pandemic, associated global economic trends (war in Ukraine and tightening monetary environment to contain inflationary pressures), on the evolution of macroeconomic performance, we evaluate the change in GDP growth for 2021 plus the impact of the changes on growth forecasts for 2022, against the forecast for 2022 made in December of 2020. We find that the latest forecast of MENA's 2022 GDP level reflects an expected average rebound of 1.4 of a percentage point, relative to the year-2022 forecast made in December 2020 (see Panel A of Figure 2).

The largest GDP-level rebound indicated for 2022, relative to the year-2022 forecast made in December 2020, is seen for the GCC (1.9 percentage points higher than what was implied by the forecasts made in December 2020), followed by Developing Oil Exporters (1.1 of a percentage point). The Developing Oil Importers in contrast, face a projected weak rebound in 2022 relative to year-2022 forecast made in December 2020 (0.3 percentage points). These GDP-level changes can be interpreted as the expected macroeconomic impact since December 2020, reflecting the early signs of recovery from the COVID-19 pandemic and impact of changes in global commodity price (as of early March 2022) as a percentage of MENA's 2020 GDP. Relative to 2020, there's virtually no change in the estimated GDP for 2021 (0 percentage points), suggesting a halt to the pandemic downturn and signaling the beginnings of a turnaround in economic performance toward pre-covid levels had begun. Nonetheless, downside risks remained for at least some MENA countries stemming from the rise in oil prices in 2021, and lately from the outbreak of war in Ukraine. The longer the war persists the higher the downside risks.

In reviewing the evolution over time of the forecasts for 2021 and 2022, we see a worsening of forecasts from those made in January 2021 to those made in July 2021 (Panel B of Figure 2); and then, the forecasts signaled a progressive rebound in growth in the buildup to the forecasts made in April 2022. . The 2021 GDP level changes for MENA, from the baseline December 2020 forecasts, was -0.2 of a percentage point in January 2022, -0.1 of a percentage point in February 2022 and 0 percentage points in both March 2022 and April 2022. Amidst a general improving trend of the average of private sector forecasters' views of the recovery since 2020, the slight downgrade in the January GDP forecast reflected forecasters' concerns at the time, about implications of the new COVID variant Omicron, concerns that subsequent months' forecasts up to the April GDP forecast suggest have eased. The GDP level upgrade forecasted for MENA in 2022, compared to the December 2020 forecasts as a baseline, was 0.7 of a percentage point in January 2022, 0.6 p.p. in February 2022, 1.0 percent in March 2022 and 1.4 percent in April 2022. These recent forecasts reflect significant improvements to the 2022 forecasts relative to forecasts made in the preceding months.



Figure 2. Uneven Recovery Relative to the 2020 Pandemic Impact: The Expected GDP Losses of the Crisis



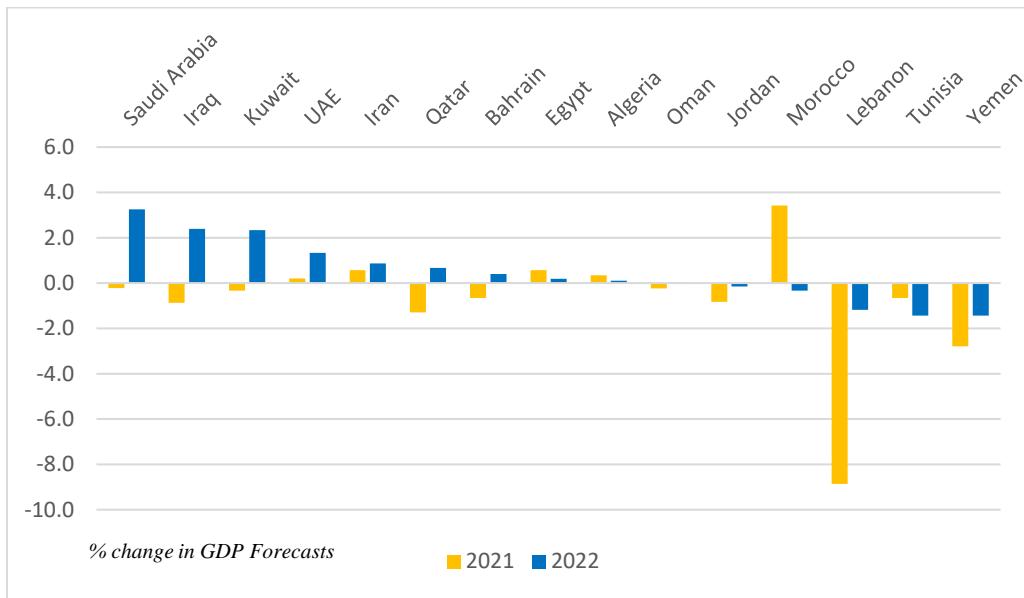
Sources: World Bank Staff calculations based on data from Focus Economics.

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 3 presents expected GDP-level changes by various private sector forecasters for each country. The year 2022 GDP-level forecasts for a few of the countries were still downgraded, though now better off than the year-2021 GDP-level forecasts computed in December 2020. Lebanon has the largest downgrade for 2021, an outcome reflecting persistent internal political strife. Figure 3 also reveals that the estimated GDP losses during 2021 are expected to be recovered during 2022 for six GCC countries, due to the windfall from surging oil prices. For the other of MENA countries, the forecast GDPs for 2022 reflect near zero growth or persisting recessions.



**Figure 3. 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.

Oil price trends are a key determinant of macroeconomic performance in MENA. Rising oil prices boost growth in the region's oil exporters yet tend to constrain growth in other MENA countries as the increased cost of importing oil takes a toll. Trends in future oil are an early signal of future growth performance in MENA. Assuming the same exposure and price shocks, export price shocks boost GDP growth for MENA's middle-income oil exporters much more than the rest of the world. On the other hand, import price increases affect MENA countries, especially oil importers, more negatively than the rest of the world (Gatti, et al, 2021).¹¹

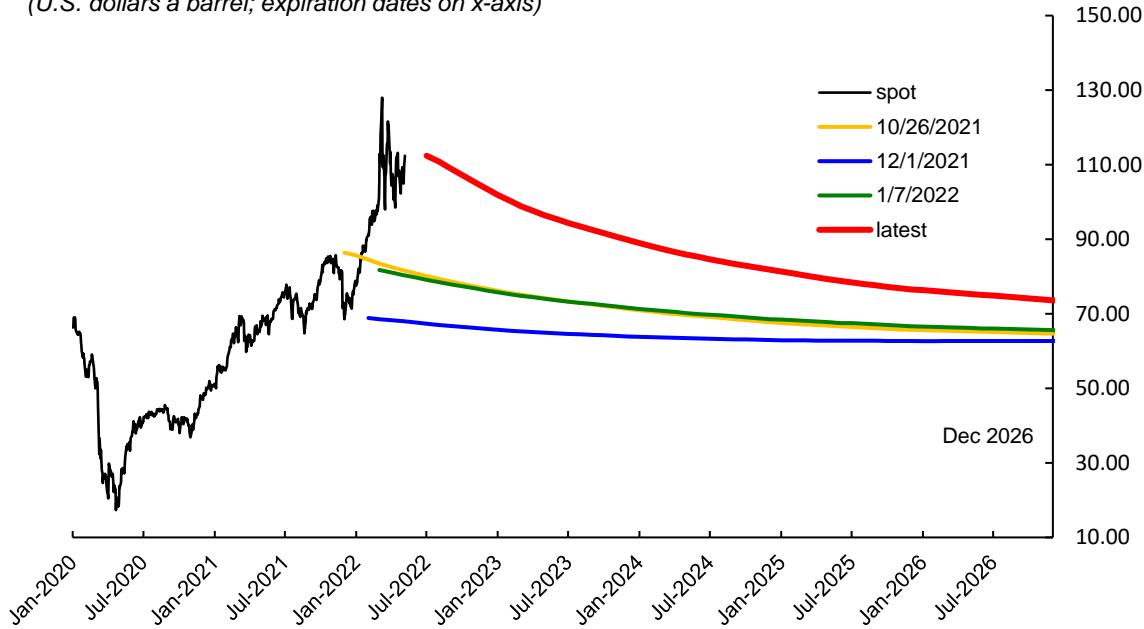
Brent crude oil prices have been increasing steadily since the beginning of 2022, reaching \$112.39 per barrel as of May 6th, 2022, an increase since last week. The high yet volatile oil price reflects expected increases in global demand as COVID cases wane, coupled with uncertainty about oil supplies as Russia's war in Ukraine continues to unfold. In the long run, latest futures curves point to a slight decrease of prices to around \$103.61 a barrel by the end of 2022, and a slow convergence to around \$73 a barrel over the next four years (Figure 4). The latest futures curve points to a higher long-run equilibrium for oil prices per barrel.

¹¹ Gatti, Roberta, Daniel Lederman, Rachel Yuting Fan, Arian Hatefi, Ha Nguyen, Anja Sautmann, Joseph Martin Sax, and Christina Wood. 2021. 'Overconfident: How Economic and Health Fault Lines Left the Middle East and North Africa Ill-Prepared to Face COVID-19', Middle East and North Africa Economic Update (October), World Bank.



Figure 4. Oil Prices—Rising in the Short-Run but Expected to Decline in the Long-Run

(U.S. dollars a barrel; expiration dates on x-axis)



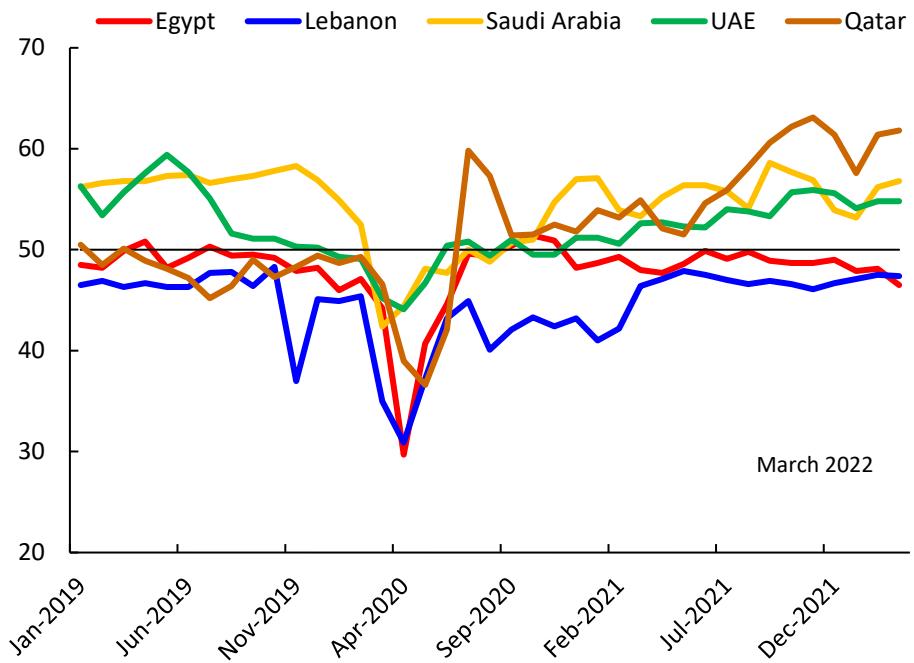
Source: World Bank MNA Chief Economist Office; and Bloomberg, L.P.

Note: The black line indicates spot price of Brent crude oil. The colored lines illustrate the futures prices of Brent crude oil on, respectively, October 26, 2021, December 1, 2021, January 7, 2022, and the latest (May 6, 2022 in this version).

The **Purchasing Managers' Index (PMI)** is another leading indicator of short term economic performance. It tracks monthly changes in private sector economic activity. A PMI value above 50 indicates an expansion on a month-to-month basis, while a value below 50 indicates a contraction. Figure 5 shows the uneven recovery among MENA countries—continuing expansion in economic activity in the GCC countries (Saudi Arabia, UAE, and Qatar) since early 2021, while developing economies such as Egypt and Lebanon have been deteriorating each month instead of recovering from previous contractions. For the UAE, the non-oil PMI reached a more-than-two-year high by the end of 2021, reflecting continuous expansion during the Expo 2020 event. Egypt's PMI dropped to a nine-month low in January, and remained below 50 in March, reflecting a contraction in the private sector. PMI data are unavailable for other MENA countries, yet another indication of missing data challenging efforts to assess economic activity in the region.



**Figure 5. Uneven Recovery in Private Sector
Purchasing Managers' Index**



Source: Bloomberg, L.P.

Note: Markit PMI for whole economy, seasonally adjusted, retrieved through Bloomberg.



III. Poverty and Social Costs

Poverty is estimated to have increased in 2021 due to the pandemic and remain a grave concern in 2022. 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 4 and 5 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 4 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 \(2020\)](#).¹² In contrast, the estimates reported in Table 5 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 4 and 5.

As mentioned, the estimates of the impact of the crisis on the number of poor people presented in Tables 4 and 5 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.

¹² 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. 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 4. Estimates of Increases in Poverty Headcounts
Based on Private-Sector Growth Forecasts as of March 2022 and Median MENA Poverty
Elasticities (percentage change since end-December 2020)**

Country	Change in Forecasts (%)	% Change in Poverty Rates since end-December 2020		
		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
Algeria	2.6	-12.7	-8.7	-6.1
Egypt	5.4	-25.7	-17.7	-12.3
Iran	4.8	-23.1	-15.9	-11.0
Iraq	7.2	-34.4	-23.6	-16.5
Jordan	2.6	-12.7	-8.7	-6.1
Lebanon	0.7	-3.2	-2.2	-1.5
Morocco	3.1	-15.0	-10.3	-7.2
Tunisia	3.0	-14.5	-9.9	-6.9

Source: MNACE Staff calculations based on data from Focus Economics and poverty-GDP elasticities by Daniel Mahler (World Bank, DECDG). Notes: 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.

**Table 5. Estimates of Increases in Poverty Headcounts
Based on Private-Sector Growth Forecasts as of March 2022 and Varying Elasticities
(percentage change since end-December 2020)**

Country	Change in forecasts (%)	% Change in Poverty Headcount Due to Expected GDP Losses from the Crisis		
		International poverty rate (\$1.9 in 2011 PPP)	International poverty rate (\$3.2 in 2011 PPP)	International poverty rate (\$5.5 in 2011 PPP)
	2022			
Algeria	2.6	-13.2	-20.9	-11.6
Egypt	5.4	-15.9	-8.5	-0.2
Iran	4.8	-50.2	-47.9	-36.0
Iraq	7.2	10.9	8.1	6.0
Jordan	2.6	-58.3	-49.0	-41.6
Lebanon	0.7	0.0	213.7	76.5
Morocco	3.1	-23.7	-20.7	-13.3
Tunisia	3.0	-21.4	-9.8	-7.2

Source: World Bank Staff calculations based on data from Focus Economics and varying poverty-GDP elasticities. Notes: “—” indicates that the base date poverty rates at the indicated thresholds were estimated at zero.¹³

¹³ 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



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, already an issue in the region, has been rising across the region. 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, dairy, fruits, meats, and vegetables. Figure 6 shows how food prices changed compared to pre-pandemic levels. 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 3, 2022, prior to the price increases induced by the war in Ukraine.

Food and energy price increases disproportionately hurt the poor because they spend larger shares of their expenditure on food and energy.¹⁴ In 2021, the UN estimated that 24 million Yemenis (83 percent of the population) were afflicted by food insecurity.¹⁵ Many MENA countries are seeing further food price increases due to the Ukraine war, which may exacerbate the severity of food insecurity in these countries depending on the policy responses. Many of the vulnerable population disproportionately afflicted during the past two years could be pushed into poverty. The population living in poverty in the MENA region is estimated to increase by 9 million between pre-pandemic levels and the end of 2022.¹⁶ Public assistance could help to mitigate the impact.

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 5 for Lebanon and other countries are lower than those previously reported in this Tracker.

¹⁴ For example, thanks to available data in Tunisia, Hoogeveen and Lopez-Acevedo (2021) show that poor households in Tunisia spend a higher budget share on food than rich households do. Based on the 2015 Household Budget Survey, the poorest decile spent 39% of their household expenditure on food while the richest decile spent 27%.

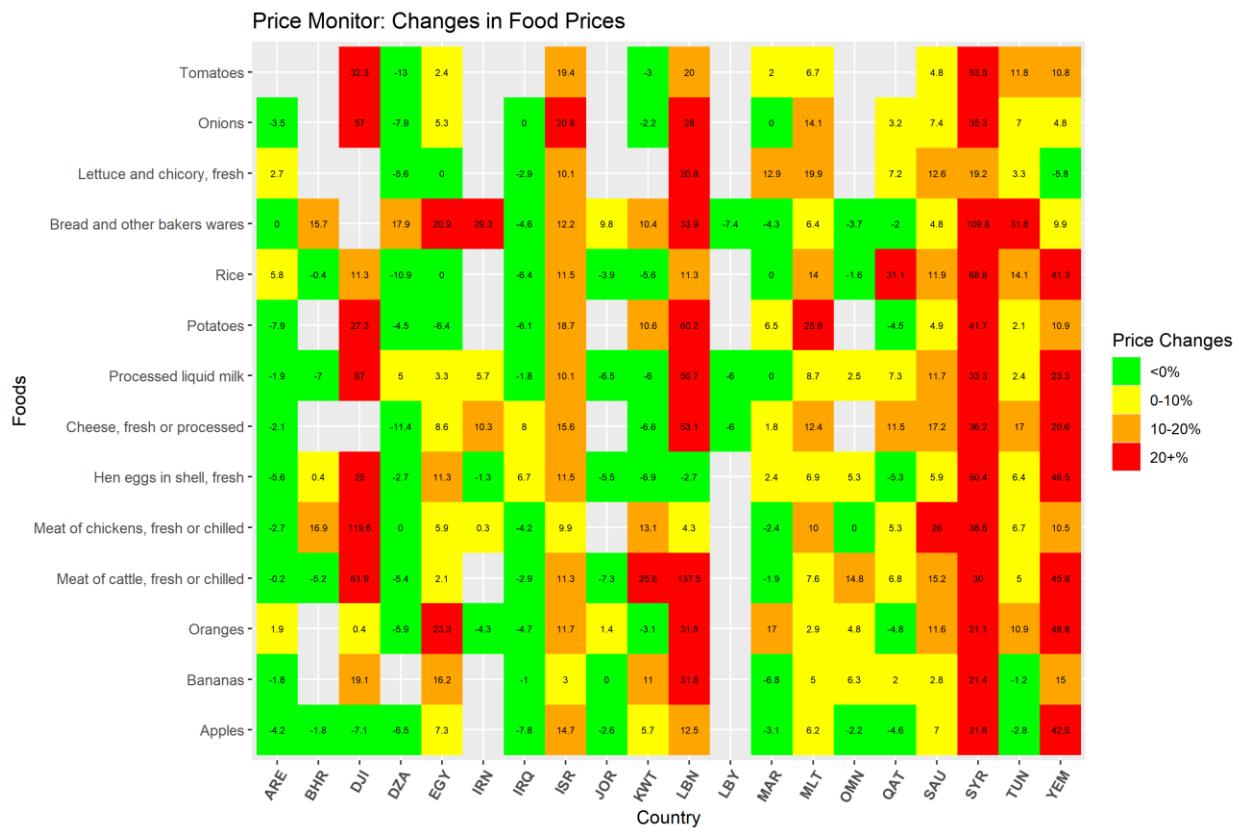
Hoogeveen, Johannes and Gladys Lopez-Acevedo. 2021. Distributional Impacts of COVID-19 in the Middle East and North Africa Region. Washington, DC: World Bank.

¹⁵ <https://www.worldbank.org/en/news/opinion/2021/09/24/mena-has-a-food-security-problem-but-there-are-ways-to-address-it>.

¹⁶ This is measured by number of people living under \$5.50 poverty line in 2022, compared to the same measure in 2019.



Figure 6: Food Price Changes between February 14, 2020 and as of February 3, 2022



IV. Insights from Academia

1. [Corporate Vulnerabilities in the Middle East, North Africa, and Pakistan in the Wake of COVID-19 Pandemic](#)

By Nordine Abidi and Mohamed Belkhir

This paper analyzes corporate vulnerabilities in the Middle East, North Africa and Pakistan (MENAP hereafter) in the wake of the COVID-19 pandemic shock. Using a sample of nearly 700 firms from eleven countries in MENAP, we assess the non-financial corporate (NFC) sector's liquidity and solvency risk and viability over the medium term under different stress test scenarios. Our findings suggest that the health crisis has exacerbated vulnerabilities in the corporate sector, though the effects are heterogeneous across the region. Small firms, which entered the pandemic in a more vulnerable position, would remain under high liquidity stress over the medium term, putting a substantial share of these firms' debt at risk of default. Similarly, liquidity needs of firms in contact-intensive sectors have also worsened and would remain elevated in 2022-23. We also show that an adverse scenario of subdued growth and premature withdrawal of policy support would impair the capacity to service interest expenses, especially among small firms, resulting in higher insolvency risk. Overall, our results indicate that some segments of the MENAP corporate sector could remain reliant on policy support during the recovery phase and that structural reforms are critical to save distressed but viable firms from bankruptcy and ensure an efficient liquidation of "zombie" firms.

2. [Epidemics, pandemics and income inequality](#)

By Chrys Esseau-Thomas, Omar Galarraga and Sherif Khalifa

The novel coronavirus is part of a series of infectious disease outbreaks that include: Ebola, Avian influenza, Middle East respiratory syndrome coronavirus, and Influenza A. This paper addresses the question of how these epidemics and pandemics affected income inequality in countries around the world during the first two decades of this century. To achieve its objective, the paper develops a model that indicates a positive association between these health crises and income inequality. To empirically test the theoretical predictions, the paper explores the effect on the Gini coefficient of a dummy variable that indicates the occurrence of an epidemic or a pandemic in a country in a given year and the number of deaths per 100,000. To properly address potential endogeneity, the authors implement a Three-Stage-Least Squares technique. The estimation shows that the number of deaths per 100,000 population variable has a statistically significant positive effect on the Gini coefficient, especially when COVID-19 data is incorporated. This suggests that not only the occurrence, but also the health consequences of COVID-19 have a significant and economically important effect on income inequality.



3. [Pandemic-Era Uncertainty](#)

By Brent H. Meyer, Emil Mihaylov, Jose Maria Barrero, Steven J. Davis, David Altig and Nicholas Bloom

The paper presents several measures of uncertainty to make five points. First, equity market traders and executives at nonfinancial firms have shared similar assessments about one-year-ahead uncertainty since the pandemic struck. Both the one-year VIX and the authors' survey-based measure of firm-level uncertainty at a one-year forecast horizon doubled at the onset of the pandemic and then fell about half-way back to pre-pandemic levels by mid 2021. Second, and in contrast, the 1-month VIX, a Twitter-based Economic Uncertainty Index, and macro forecaster disagreement all rose sharply in reaction to the pandemic but retrenched almost completely by mid 2021. Third, Categorical Policy Uncertainty Indexes highlight the changing sources of uncertainty – from healthcare and fiscal policy uncertainty in spring 2020 to elevated uncertainty around monetary policy and national security as of March 2022. Fourth, firm-level risk perceptions skewed heavily to the downside in spring 2020 but shifted rapidly to the upside from fall 2020 onwards. Perceived upside uncertainty remains highly elevated as of early 2022. Fifth, the authors' survey evidence suggests that elevated uncertainty is exerting only mild restraint on capital investment plans for 2022 and 2023, perhaps because perceived risks are so skewed to the upside.

4. [Fed tapering announcements: Impact on Middle Eastern and African financial markets](#)

By Giscard Assoumou-Ella, Cécile Bastidon, Bastien Bonijoly

The paper studies the impact of the announcements of “tapering” (exit from the unconventional monetary policies of the Federal Reserve) on a sample of 16 countries of the Middle East and Africa region. The events under study are the announcements of the Federal Open Market Committee in the context of meetings and minutes during the tapering period (2013/01–2015/04). The study compares the impact on these countries with that on three emerging and advanced economies control groups. The authors find that the countries under study, despite a lower level of financial development, are also characterized by significant announcement effects. The dates of significant announcements are more similar to Western Europe than to the other emerging economies, which reflects major economic ties with Europe. Domestic inflation and FDI have the most significant direct and interaction effects. In particular, the direct effect of FDI is favorable, but their indirect effect is unfavorable, as in the literature on emerging countries where financial development frequently increases vulnerabilities to the impact of international monetary policy announcements. More generally, this result points to the macroeconomic issue of the absorptive capacity necessary to achieve the benefits of FDI (Durham, 2004).



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