REALITY CHECK: FORECASTING GROWTH IN THE MIDDLE EAST AND NORTH AFRICA IN TIMES OF UNCERTAINTY

OFFICE OF THE CHIEF ECONOMIST
MIDDLE EAST & NORTH AFRICA
**THE WORLD BANK**

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Key Messages

1. Macro outlook: Uncertainty reigns with the Russia-Ukraine war and the pandemic

2. Uneven and insufficient recovery under uncertainty
   - [GDP growth - MENA region: 5.2%; GDP per capita growth - MENA region: 3.6%]
   - [GDP per capita for 11 out of 17 countries may not recover to pre-pandemic levels by end of 2022]

3. In uncertain times, important not to be overconfident about the region's growth prospects

4. A reality check on economic forecasts
   - Forecasts are more uncertain and overly optimistic in the MENA region (WB, IMF, private sector)
   - Timely and credible data systems improve economic forecasts

5. Data transparency & policy recommendations

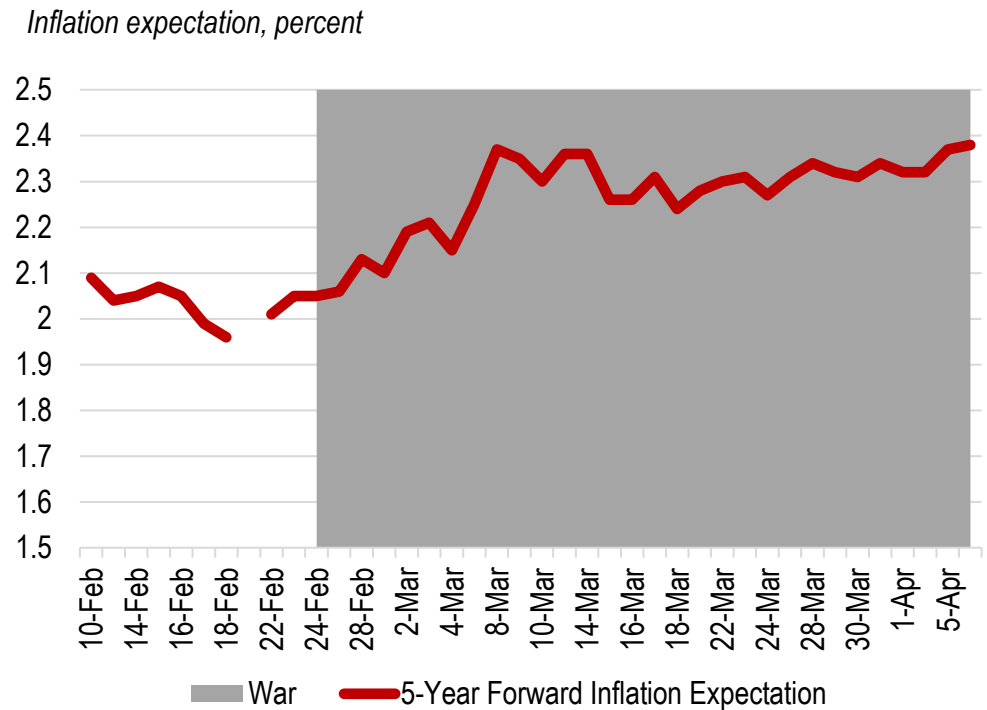# Global Shocks of Uncertain Magnitude from the Russia-Ukraine War

Oil and wheat prices, normalized to 1 on Feb 23
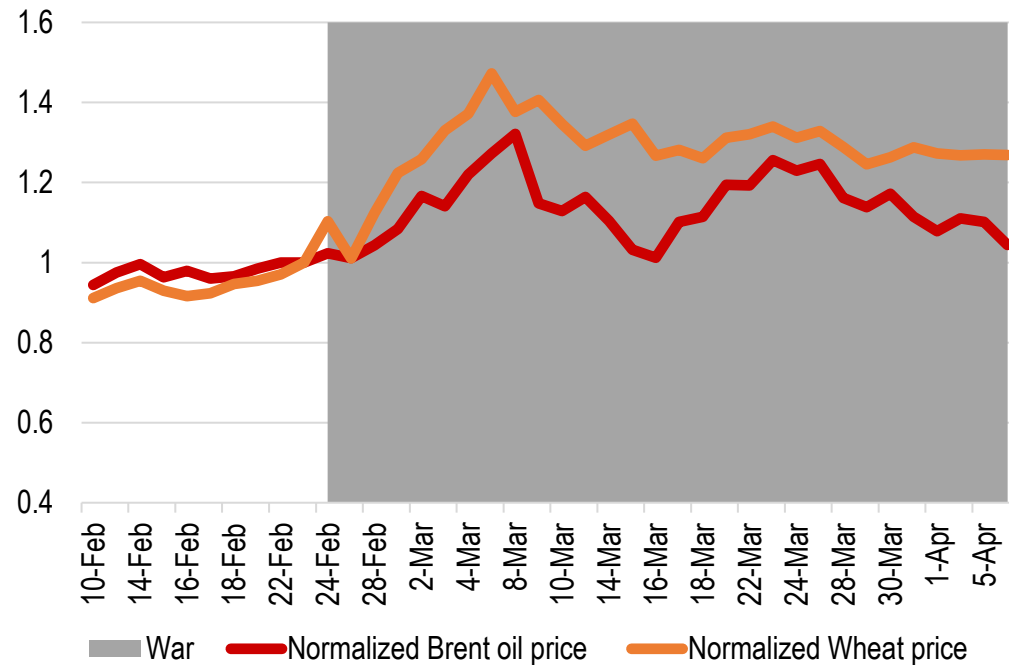
Source: Business Insider Data
Note: Brent oil price and wheat price are normalized to 1 on Feb 23, 2022 (one day before the invasion)

US 5-year forward inflation expectation

Source: Federal Reserve Bank at St Louis.
Note: Data on Feb 21 is not available (market was closed)

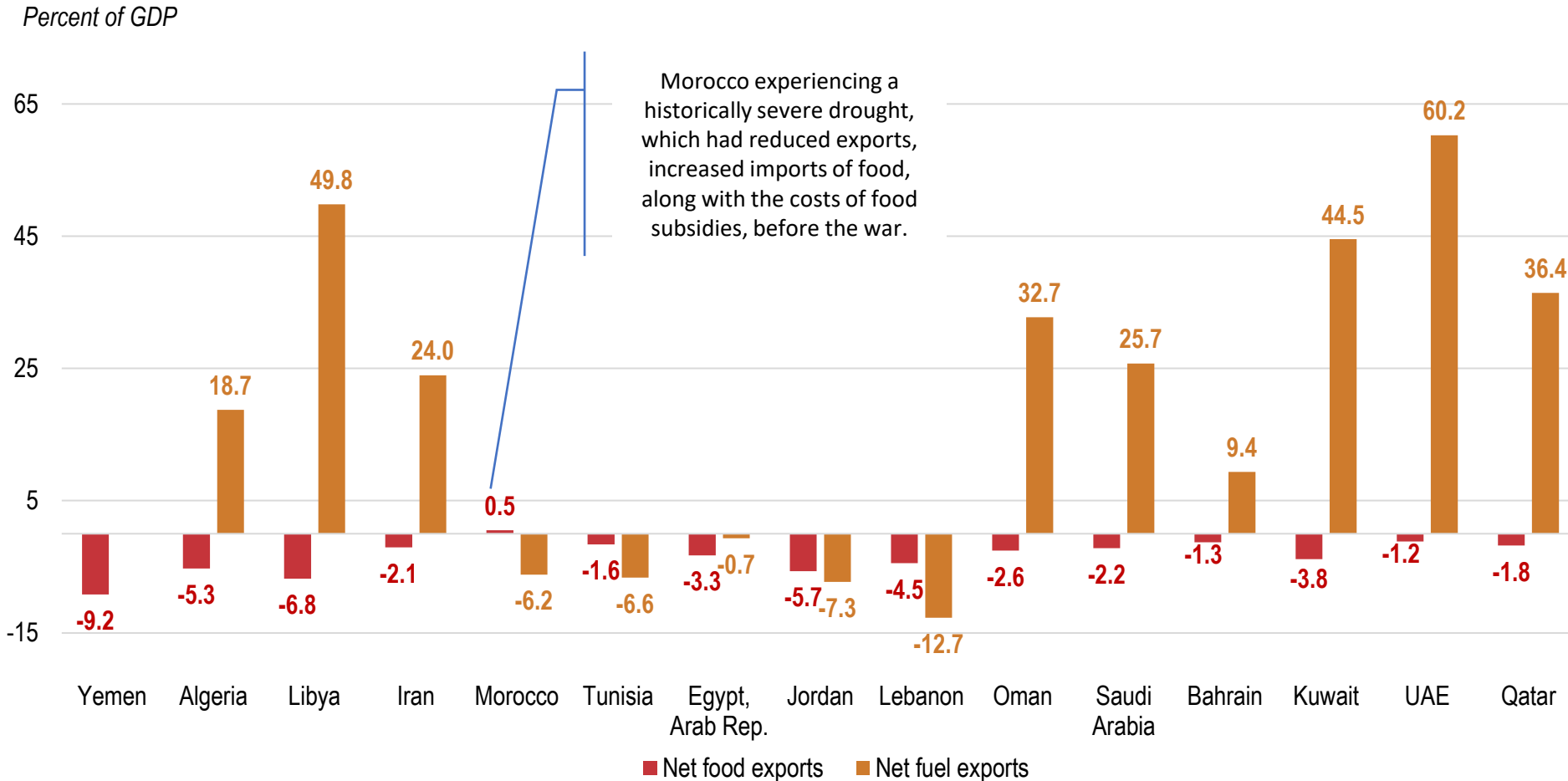# Potential channels of impacts on MENA: a summary

DIRECT IMPACTS

	MENA Oil Exporters	MENA Oil Importers	MENA Food Importers
Country (Trade Balance)	+	−	−
Government Budget (Fiscal Balance)	+	? (depends on energy SOEs)	− (automatic stabilizers)
Firms (users of inputs of energy, wheat)	−	−	−
Households (net consumers of food, energy)	−	−	−

INDIRECT (KNOCK-ON) IMPACTS

Effects on MENA	Examples
Financial instability in countries with high debt and debt in foreign currencies.	Faster than expected increases in global interest rates causes rising country-risk premia and currency depreciations
Heightened social unrest	Food and energy price hikes have been associated with social unrest
Potential delays or reversals of reforms in fiscal and social protection	Discretionary changes in fiscal expenditures (e.g., increases in subsidies) to counteract food and energy price increases
Diversion of humanitarian assistance away from MENA fragile states	Donors shift aid to Ukraine

Uneven Recovery: Heterogeneous impacts (of uncertain magnitude) depending on net fuel and food exporter position

MENA countries are mostly net food importers and many are large net fuel exporters

Percent of GDP

Morocco experiencing a historically severe drought, which had reduced exports, increased imports of food, along with the costs of food subsidies, before the war.

Chart data — Net food exports / Net fuel exports (Percent of GDP):

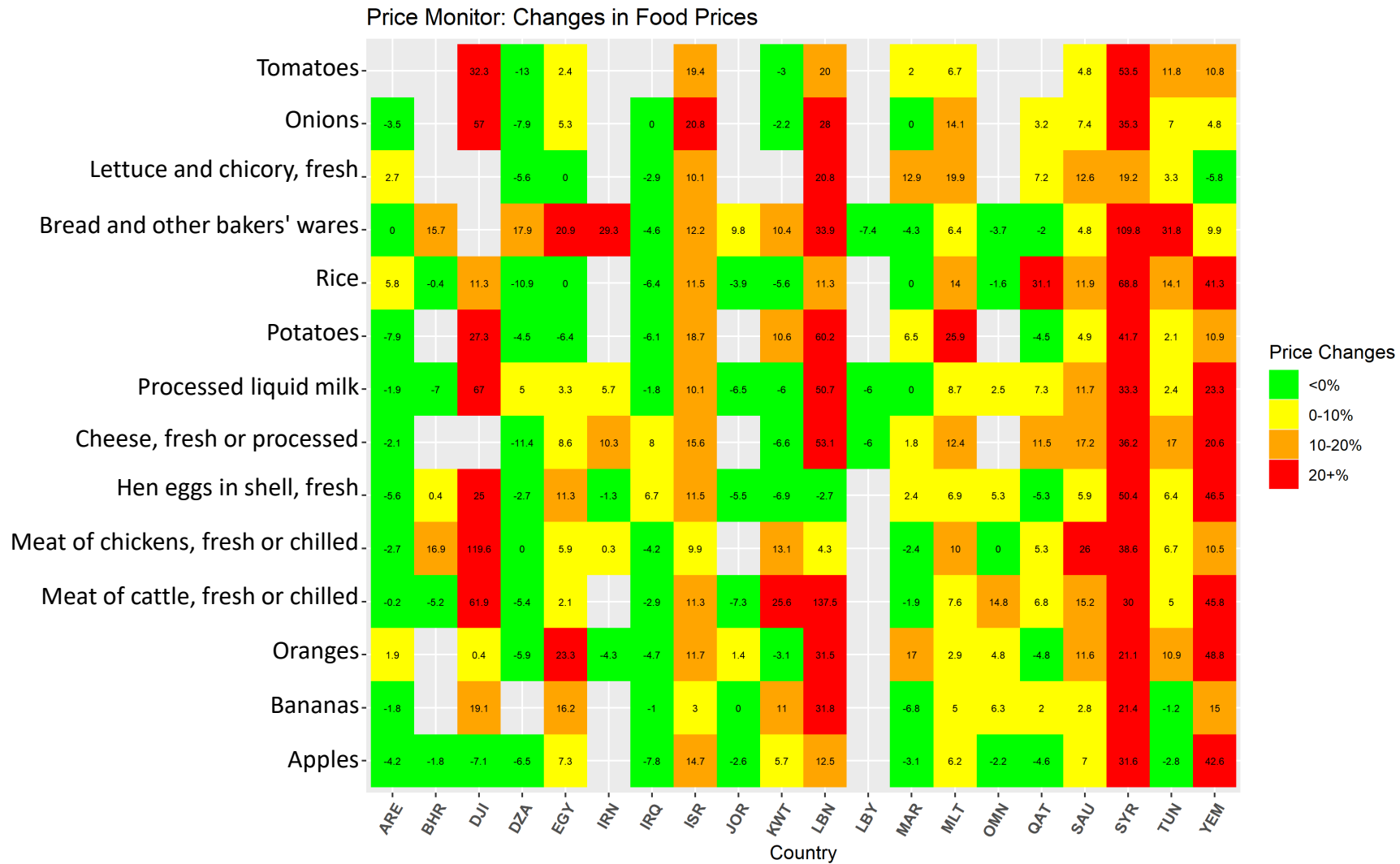| Country	Net food exports	Net fuel exports
Yemen	-9.2	
Algeria	-5.3	18.7
Libya	-6.8	49.8
Iran	-2.1	24.0
Morocco	0.5	-6.2
Tunisia	-1.6	-6.6
Egypt, Arab Rep.	-3.3	-0.7
Jordan	-5.7	-7.3
Lebanon	-4.5	-12.7
Oman	-2.6	32.7
Saudi Arabia	-2.2	25.7
Bahrain	-1.3	9.4
Kuwait	-3.8	44.5
UAE	-1.2	60.2
Qatar	-1.8	36.4

■ Net food exports   ■ Net fuel exports

Source: World Development Indicators (for countries with available data).
Notes: Data are 2019, except Oman, Libya, Iran, Yemen (2018), Algeria (2017). Fuel exports data for Yemen are not available. Data from 2016.

Many MENA Economies was already at Risk of Food Insecurity (Pre-War)

Food Price Changes between February 14th, 2020 and February 3rd , 2022
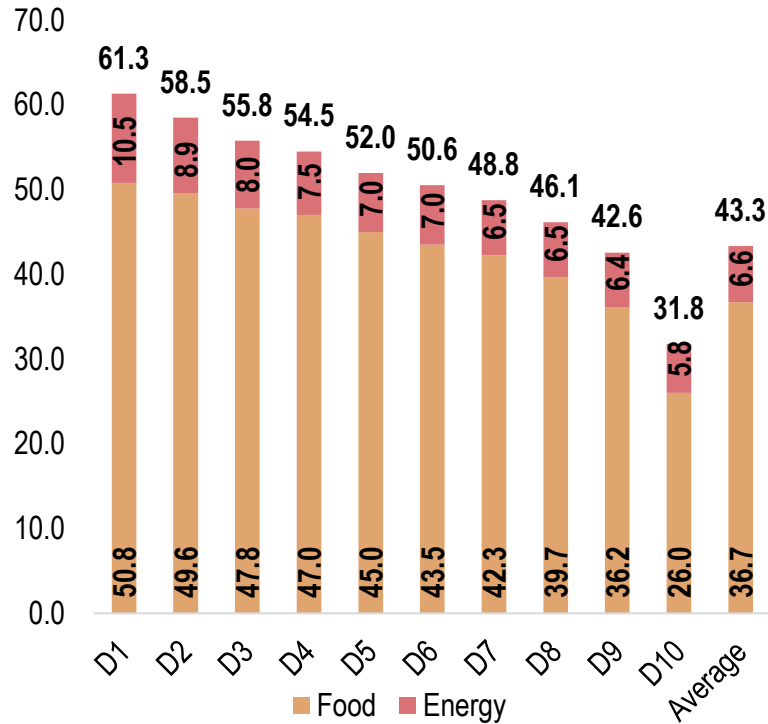
Price Monitor: Changes in Food Prices

	ARE	BHR	DJI	DZA	EGY	IRN	IRQ	ISR	JOR	KWT	LBN	LBY	MAR	MLT	OMN	QAT	SAU	SYR	TUN	YEM
Tomatoes			32.3	-13	2.4		19.4		-3	20			2	6.7			4.8	53.5	11.8	10.8
Onions	-3.5		57	-7.9	5.3		0	20.8		-2.2	28		0	14.1		3.2	7.4	35.3	7	4.8
Lettuce and chicory, fresh	2.7			-5.6	0		-2.9	10.1			20.8		12.9	19.9		7.2	12.6	19.2	3.3	-5.8
Bread and other bakers' wares	0	15.7		17.9	20.9	29.3	-4.6	12.2	9.8	10.4	33.9	-7.4	-4.3	6.4	-3.7	-2	4.8	109.8	31.8	9.9
Rice	5.8	-0.4	11.3	-10.9	0		-6.4	11.5	-3.9	-5.6	11.3		0	14	-1.6	31.1	11.9	68.8	14.1	41.3
Potatoes	-7.9		27.3	-4.5	-6.4		-6.1	18.7		10.6	60.2		6.5	25.9		-4.5	4.9	41.7	2.1	10.9
Processed liquid milk	-1.9	-7	67	5	3.3	5.7	-1.8	10.1	-6.5	-6	50.7	-6	0	8.7	2.5	7.3	11.7	33.3	2.4	23.3
Cheese, fresh or processed	-2.1			-11.4	8.6	10.3	8	15.6		-6.6	53.1	-6	1.8	12.4		11.5	17.2	36.2	17	20.6
Hen eggs in shell, fresh	-5.6	0.4	25	-2.7	11.3	-1.3	6.7	11.5	-5.5	-6.9	-2.7		2.4	6.9	5.3	-5.3	5.9	50.4	6.4	46.5
Meat of chickens, fresh or chilled	-2.7	16.9	119.6	0	5.9	0.3	-4.2	9.9		13.1	4.3		-2.4	10	0	5.3	26	38.6	6.7	10.5
Meat of cattle, fresh or chilled	-0.2	-5.2	61.9	-5.4	2.1		-2.9	11.3	-7.3	25.6	137.5		-1.9	7.6	14.8	6.8	15.2	30	5	45.8
Oranges	1.9		0.4	-5.9	23.3	-4.3	-4.7	11.7	1.4	-3.1	31.5		17	2.9	4.8	-4.8	11.6	21.1	10.9	48.8
Bananas	-1.8		19.1		16.2		-1	3	0	11	31.8		-6.8	5	6.3	2	2.8	21.4	-1.2	15
Apples	-4.2	-1.8	-7.1	-6.5	7.3		-7.8	14.7	-2.6	5.7	12.5		-3.1	6.2	-2.2	-4.6	7	31.6	-2.8	42.6

Country

Price Changes
- <0%
- 0-10%
- 10-20%
- 20+%

The poor will be disproportionately affected because food and energy weigh more heavily on their budgets

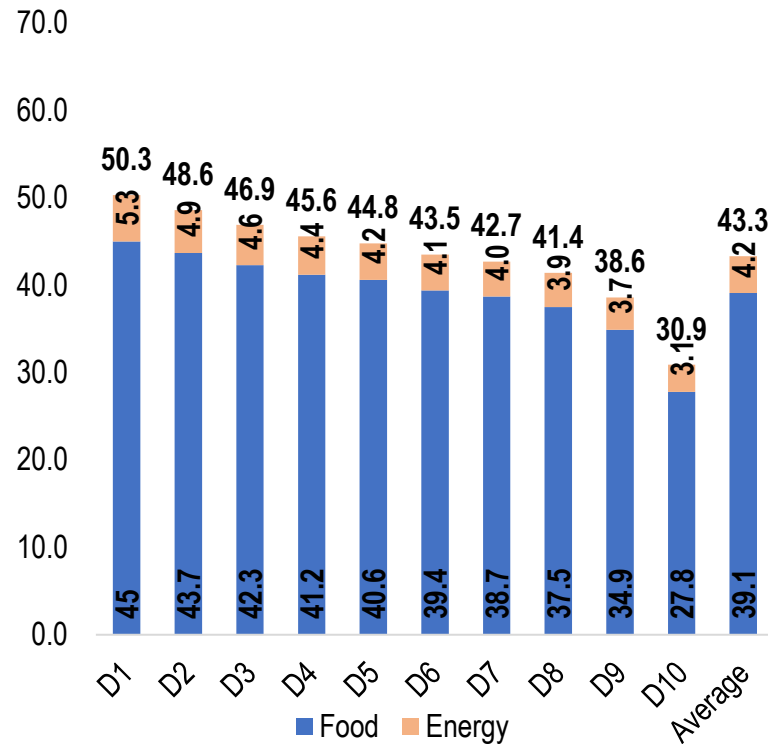## Share of food and energy household consumption by decile in Morocco, Egypt and West Bank and Gaza (2013 data)
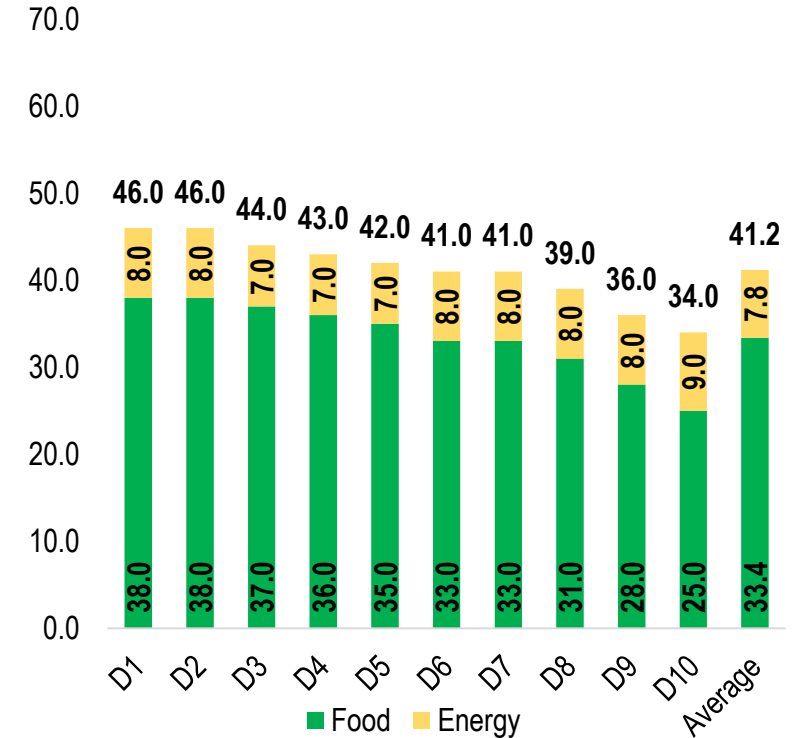
Morocco (2013)

Percent of expenditure

Decile	Food	Energy	Total
D1	50.8	10.5	61.3
D2	49.6	8.9	58.5
D3	47.8	8.0	55.8
D4	47.0	7.5	54.5
D5	45.0	7.0	52.0
D6	43.5	7.0	50.6
D7	42.3	6.5	48.8
D8	39.7	6.5	46.1
D9	36.2	6.4	42.6
D10	26.0	5.8	31.8
Average	36.7	6.6	43.3

■ Food ■ Energy

Egypt (2017/2018)

Percent of expenditure

Decile	Food	Energy	Total
D1	45	5.3	50.3
D2	43.7	4.9	48.6
D3	42.3	4.6	46.9
D4	41.2	4.4	45.6
D5	40.6	4.2	44.8
D6	39.4	4.1	43.5
D7	38.7	4.0	42.7
D8	37.5	3.9	41.4
D9	34.9	3.7	38.6
D10	27.8	3.1	30.9
Average	39.1	4.2	43.3

■ Food ■ Energy

West Bank and Gaza (2016/2017)

Percent of expenditure

Decile	Food	Energy	Total
D1	38.0	8.0	46.0
D2	38.0	8.0	46.0
D3	37.0	7.0	44.0
D4	36.0	7.0	43.0
D5	35.0	7.0	42.0
D6	33.0	8.0	41.0
D7	33.0	8.0	41.0
D8	31.0	8.0	39.0
D9	28.0	8.0	36.0
D10	25.0	9.0	34.0
Average	33.4	7.8	41.2

■ Food ■ Energy

Source: Morocco: World Bank staff estimation using National Survey of Household Consumption and Expenditure 2013 (Enquête Nationale sur la Consommation et les Dépenses des Ménages) and 2021 prices. West Bank and Gaza: Palestinian Expenditure and Consumption Survey (PECS) 2016/2017.Egypt: Household Income, Expenditure and Consumption Survey (HIECS) 2017/2018.

Uneven Recovery under Uncertain Evolution of Virus: COVID-19 Vaccination Rates differ across countries

Vaccination Rates for Many MENA Countries are Below Income Peers
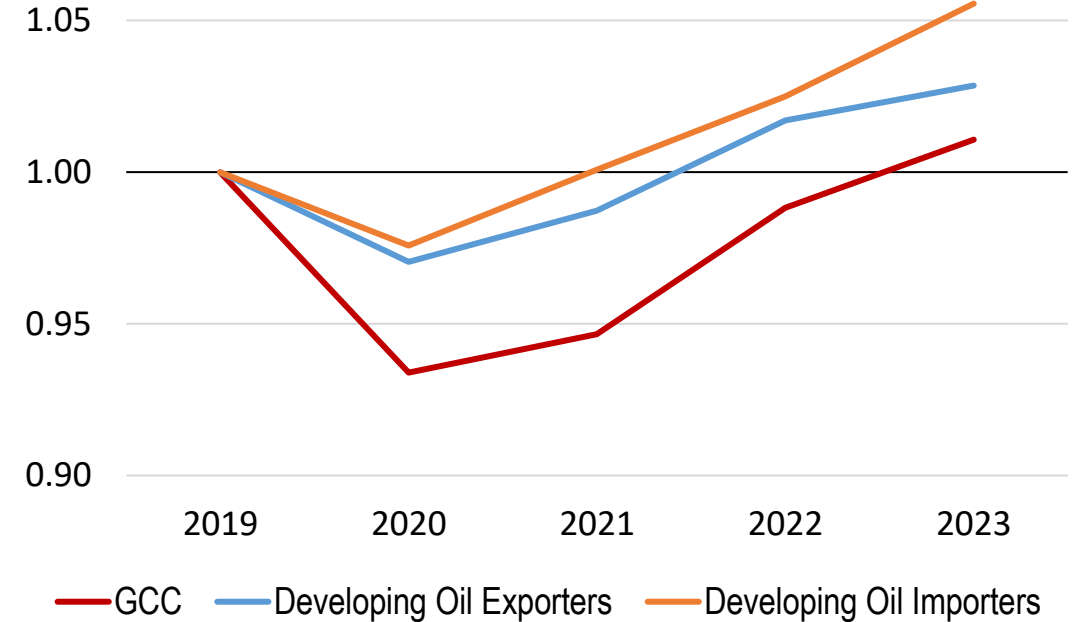
Vaccination Rate (as of 4/4/2022)

Log of 2020 GDP per Capita (constant 2015 US$)
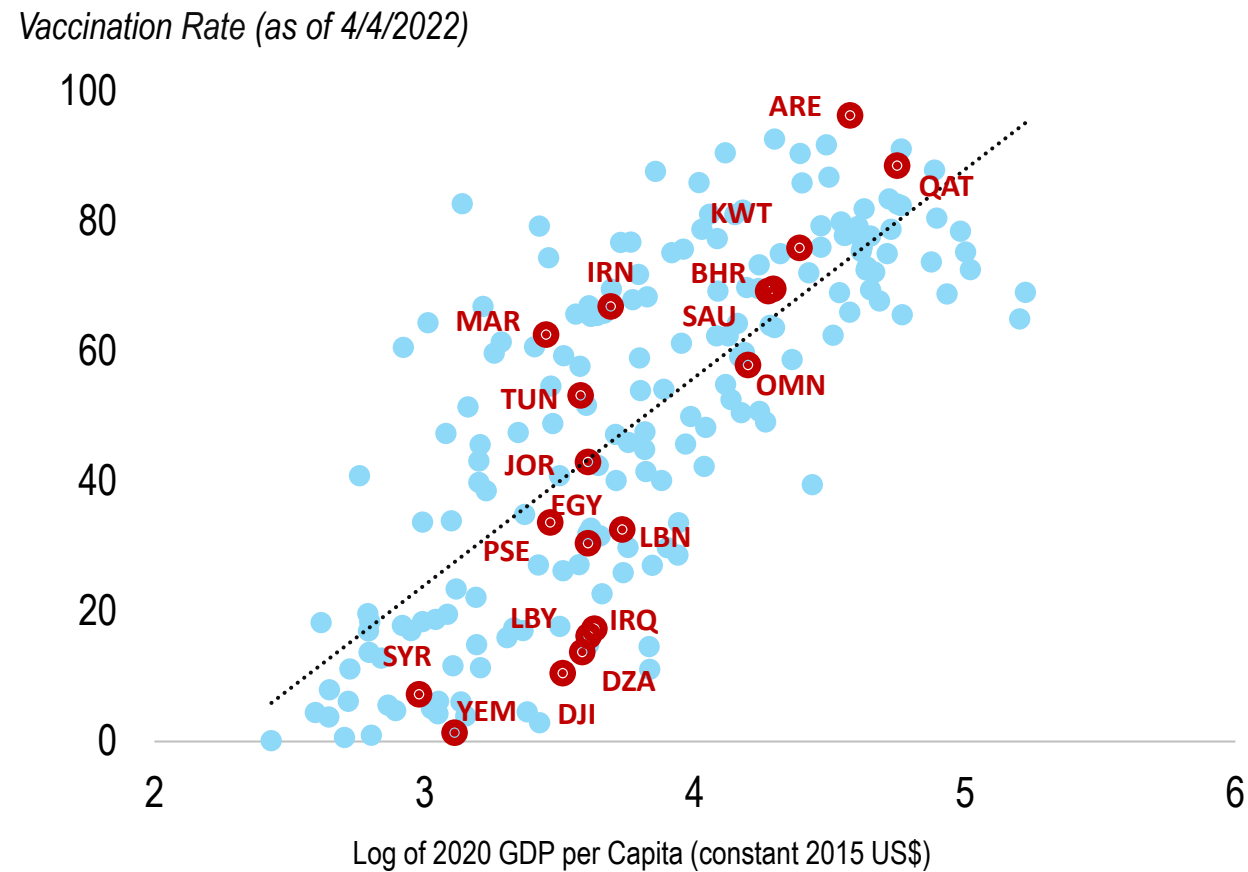
Current Growth Forecasts Suggest that We are Not Out of the Woods Yet

GDP per capita between 2019-2023

Panel A. MENA
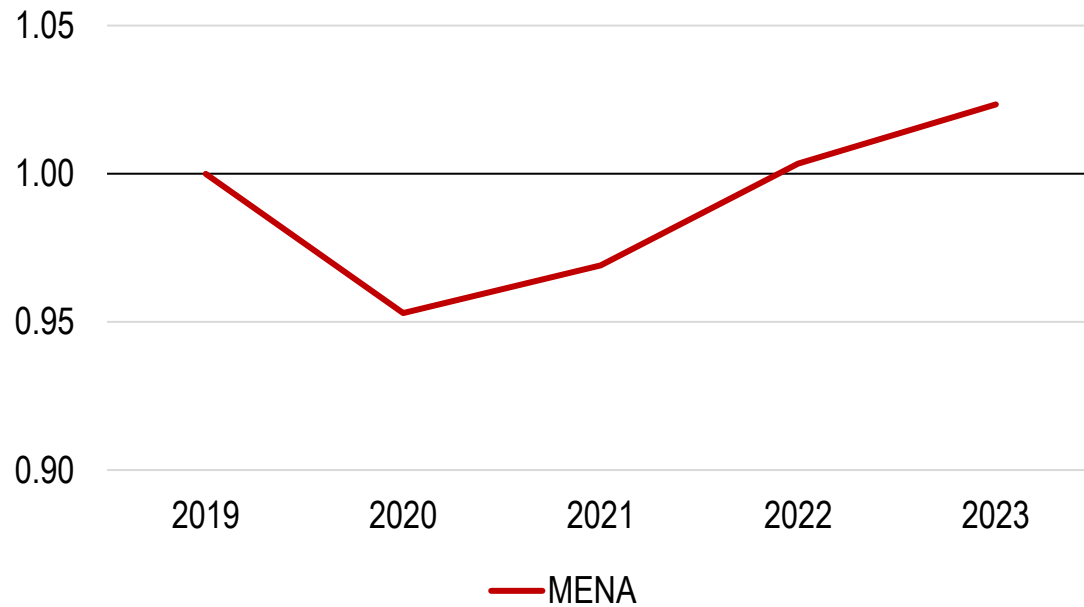
Panel B. MENA Country Groups

Much uncertainty around forecasts
If forecasts materialize, 11 out of 17 economies may not recover to pre-pandemic levels by end of 2022

Reality Check on Growth Forecasts

1. **Growth forecasts in MENA are (WB GEP):**
   - **more optimistic** 2010-2020: 2.5 % (MENA) vs 1.2 % (ROW). Without 2020: 1.7 % (MENA) 0.3 % (ROW)
   - **more inaccurate** 2010-2020: 3.3 % (MENA) vs 2.4 % (ROW). Without 2020: 2.5 % (MENA) 1.7 % (ROW)

2. **Higher growth volatility reduces forecast accuracy.**
   - Relevant for MENA: Conflict, exposure to commodity shocks.

3. **Data transparency reduces Forecast Errors**:
   - Better Data Transparency reduces the magnitude of forecast errors and optimism bias
   - Improvements in the overall data ecosystem, not just GDP-related elements, matter.

4. **The World Bank has more accurate forecasts** than the IMF and the private sector.

Reality Check: Living with Uncertain Forecasts

MENA Growth Forecasts have been More Optimistic & Uncertain than Other regions

January Growth Forecast Errors by Region and Institution (2010–2020)

Panel (A): Optimism

Percentage Points

Panel (B): Inaccuracy
(Absolute Value of Forecast Errors)

Percentage Points
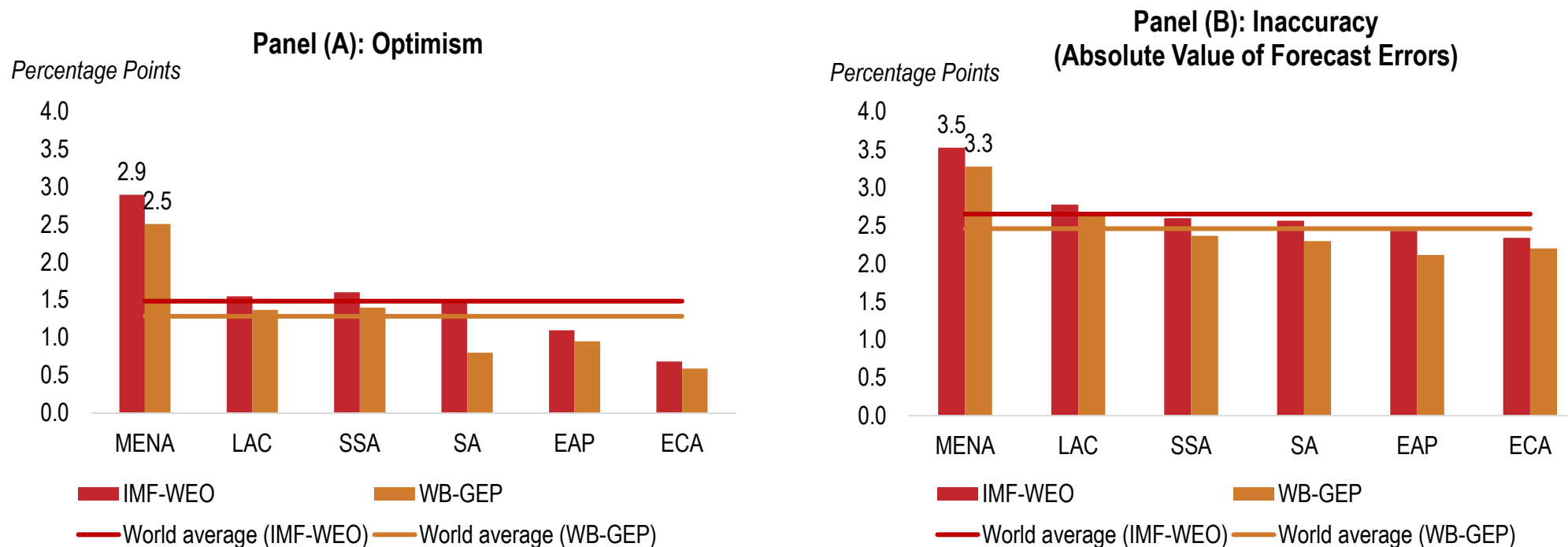
Source: Authors' calculations based on the International Monetary Fund's World Economic Outlook (WEO) and the World Bank's Global Economic Prospects.
Notes: The figure displays the forecast errors (Panel A) and absolute forecast errors (Panel B) of the IMF's World Economic Outlook and the World Bank's Global Economic Prospects in January. Forecast errors are calculated as forecast GDP growth rates minus realized GDP growth rates. Absolute forecast errors are calculated as the absolute value of the forecast errors. The figure is constructed based on a common sample of 141 countries (largely developing economies) collected in January for each year between 2010 and 2020 . The MENA region includes both GCC and non-GCC countries.

- Forecast Error = Forecast – Realized Growth

…. even when 2020 is excluded

Pre-Pandemic January Forecast Errors and Absolute Forecast Errors by Region and Institution (2010–2019)

Panel (A): Optimism
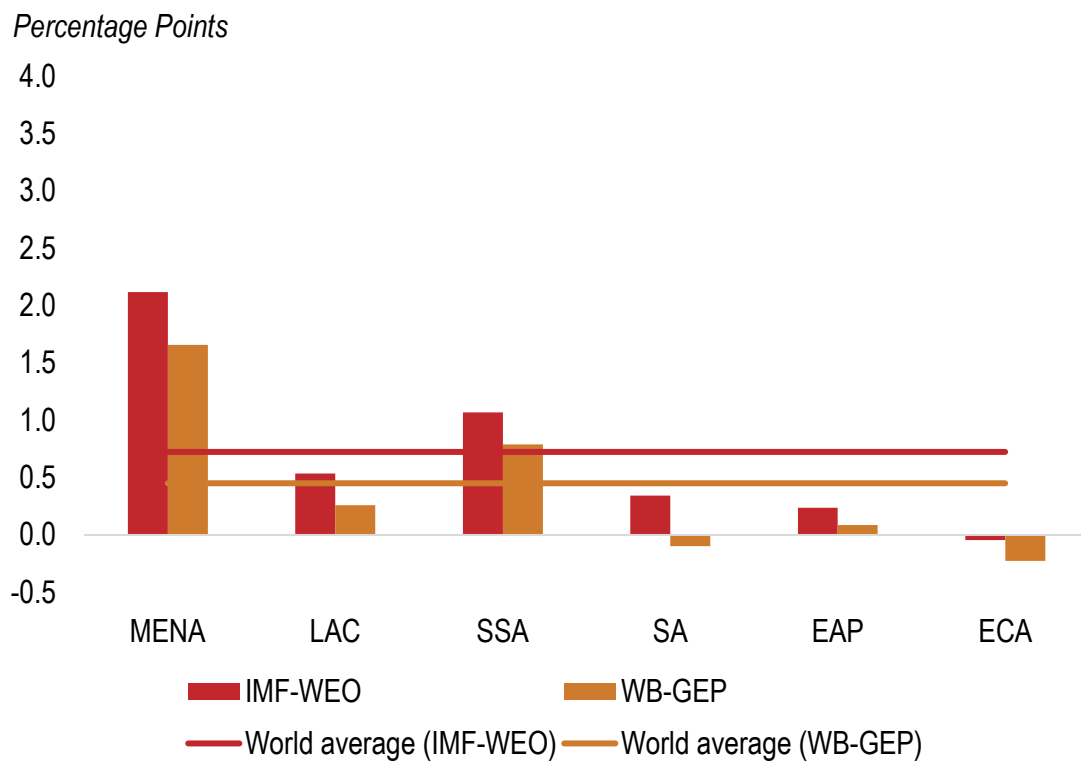
**Panel (B): Inaccuracy (Absolute Value of Forecast Errors)**
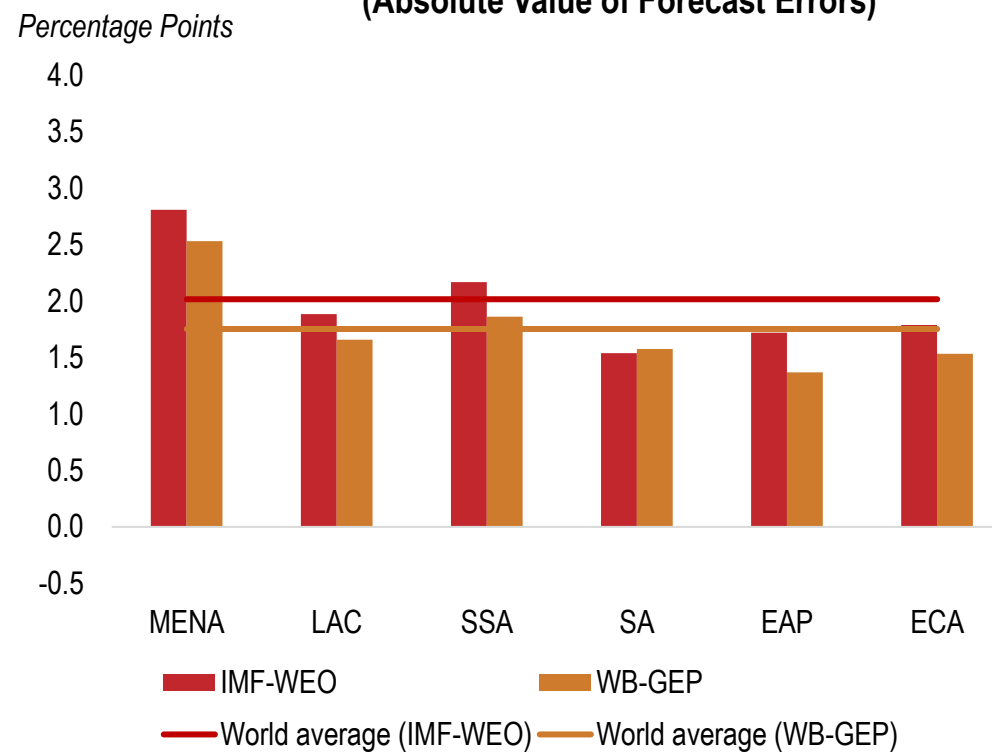
- Forecast Error = Forecast – Realized Growth

Uncertainty Around MENA's 2022 Growth Forecasts

- Forecasts remain uncertain for 2022, given global shock (Russia-Ukraine War, Pandemic)

- Forecast uncertainty varies depending on whether 2022 will look like 2020, 2019, or a typical year

Uncertainty Around Our 2022 Forecasts Assuming Typical Forecast Errors

Growth Rates

■ January 2022 Growth Forecast

▲ Adjusted Growth Forecast (Based on Median Forecast Error 2010-2020)

13
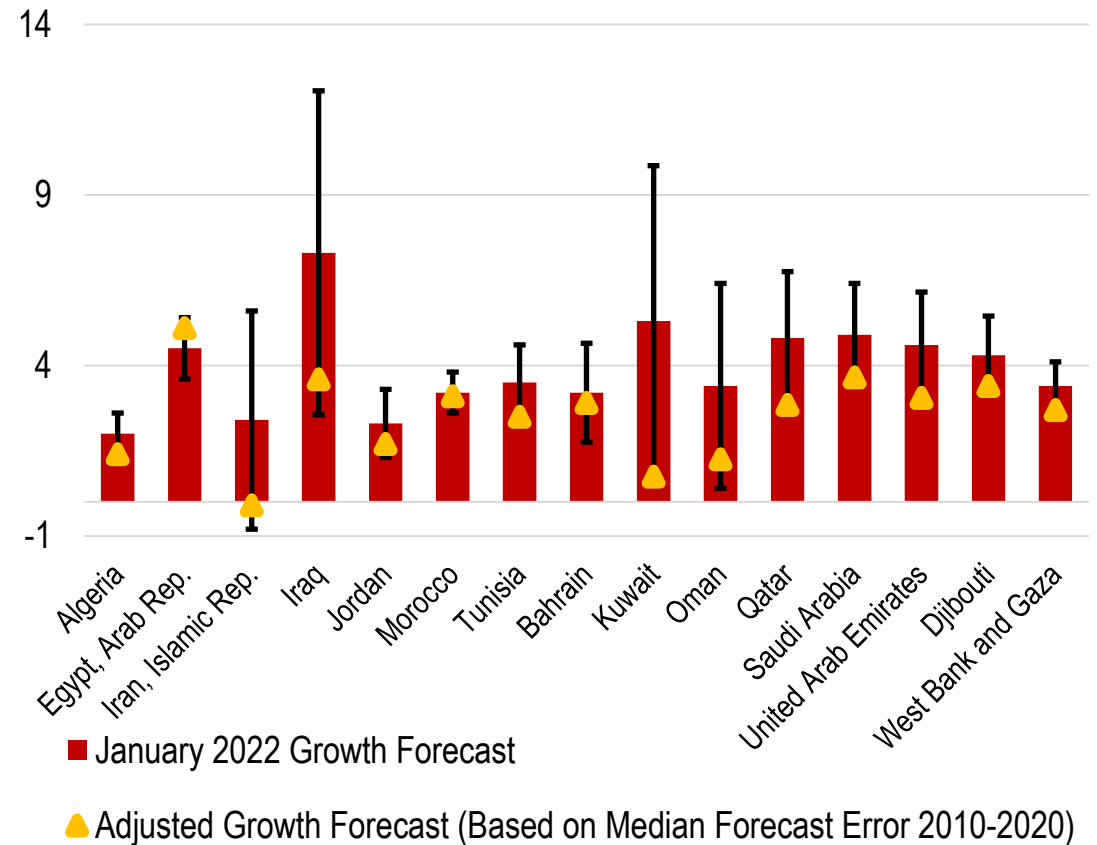
Forecast Errors are larger for Economies with greater Growth Volatility

Absolute Value of Forecast Errors per Tercile of Growth Volatility (2010–2020)

Absolute Forecast Errors, Percentage Points

Terciles of Growth Variability

■ Tercile 1   ■ Tercile 2   ■ Tercile 3
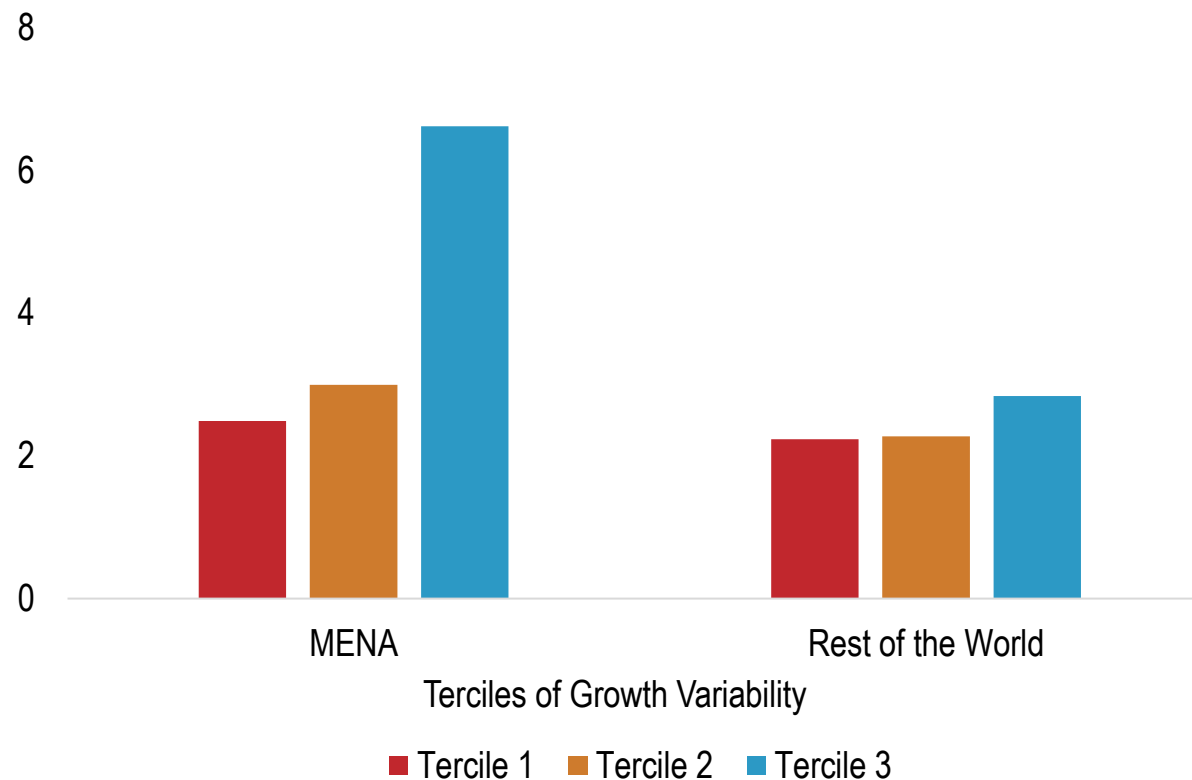
Note: Growth volatility is calculated as the rolling standard deviation of the previous 10 years.

Internal Conflict can be a source of Growth Volatility

Conflicts and Absolute Growth Forecast Errors, MENA vs the World

Absolute Forecast Errors, Percentage Points

WB-GEP

■ Global Sample ■ MENA
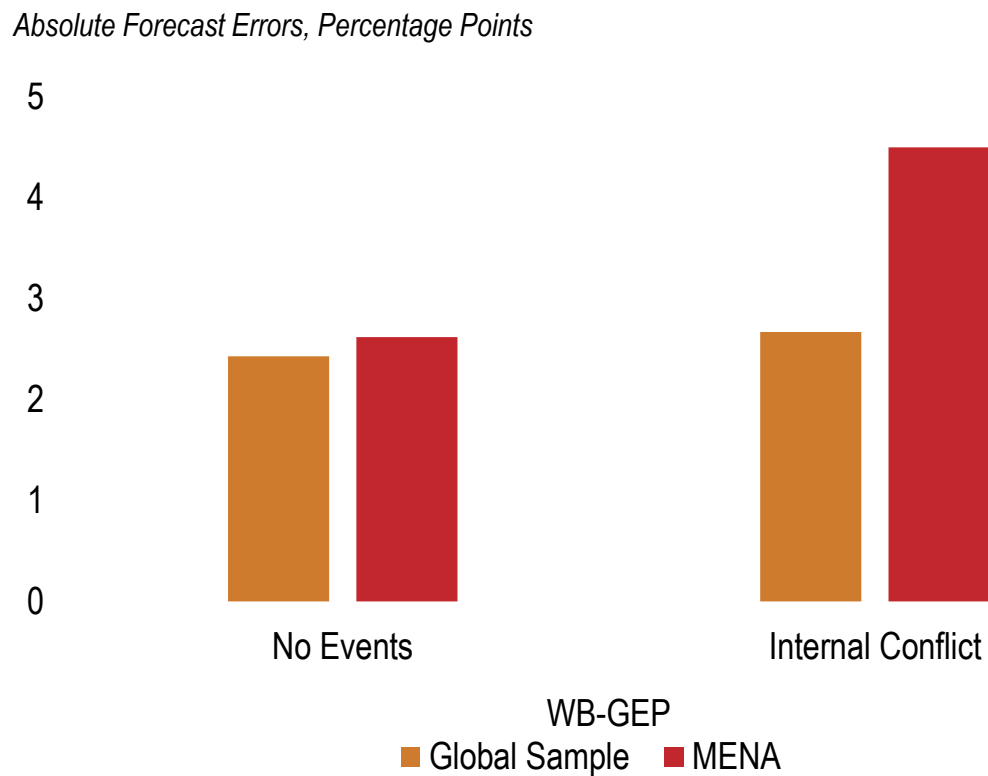
Source: UCDP-PRIO Dataset for Conflict. Vertical axes show absolute forecast errors in percentage terms.
No Events: *Observations with no occurrence of Internal Conflict (or start of conflict), as well as observations without Large Natural Disasters*
Internal Conflict: *Any year with an occurrence Internal Conflict.*
Internal Conflict is defined as either conflict falling under the category of Intrastate Conflict and Internationalized Intrastate Conflict. Global Sample includes MENA.
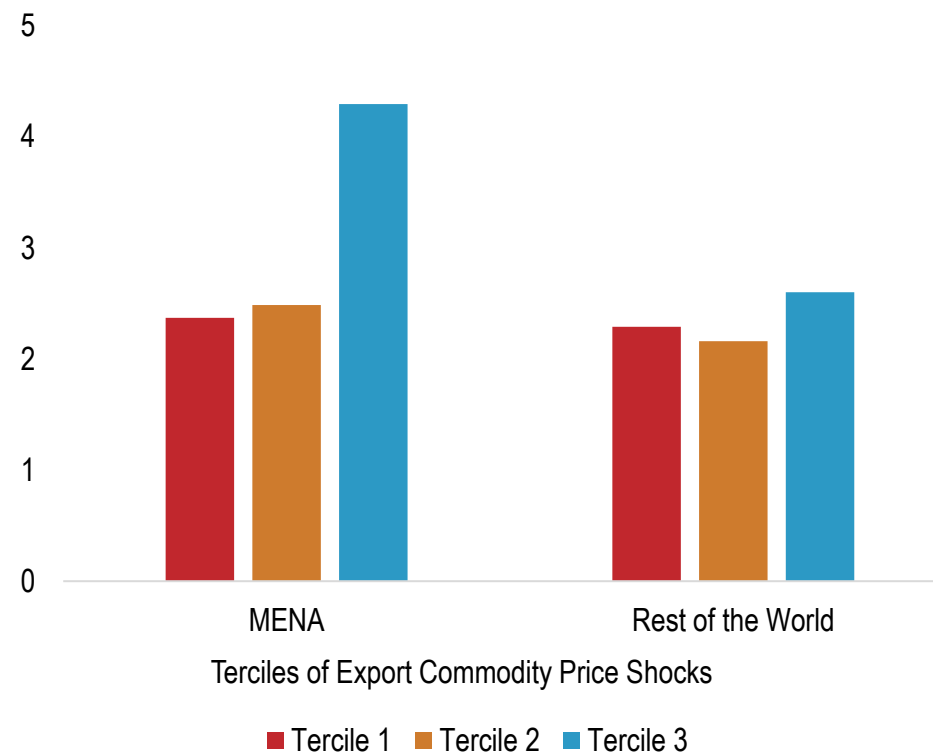
...as well as Commodity Price Shocks

Export Commodity Price Shocks
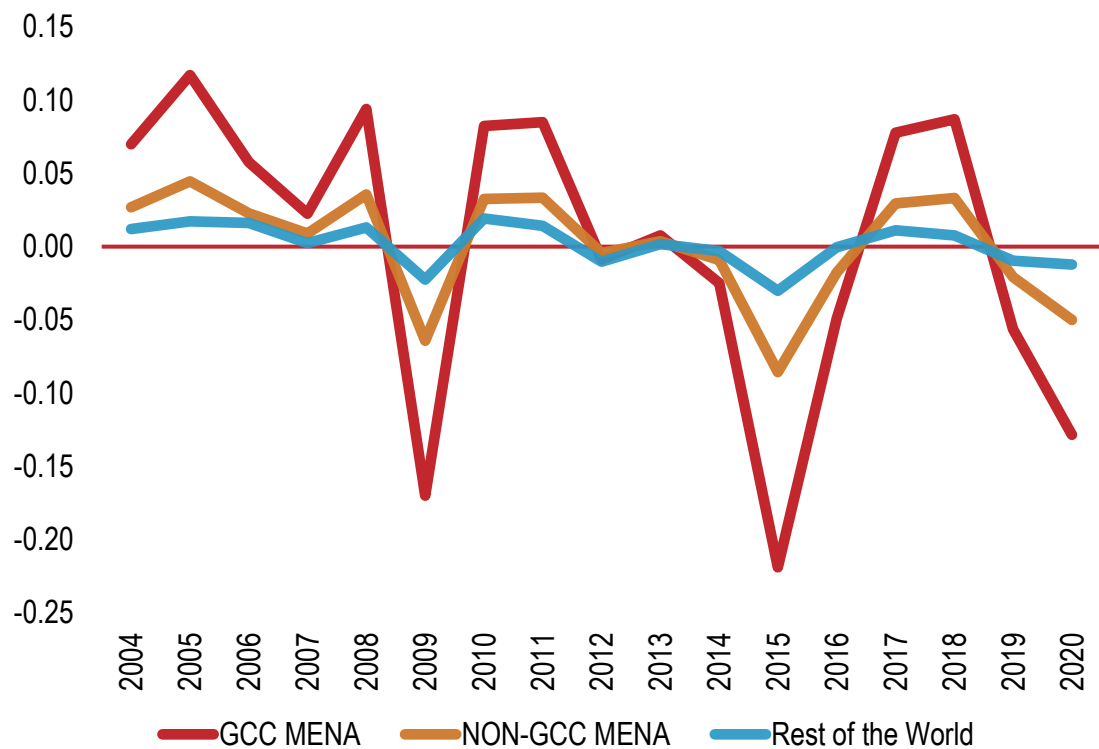
**Absolute Forecast Errors and Terciles of Export Commodity Price Shocks (2010–2020)**

MENA's Missing Macro Data: Frequency and Timeliness (as of Jan 2022)

Countries	GDP Frequency and Timeliness	Industrial Production Frequency and Timeliness	Unemployment Frequency and Timeliness
Algeria	Q2 2021	Q3 2021	May 2019
Bahrain	Q3 2021	n/a	2020
Djibouti	2018	n/a	n/a
Egypt	Q3 2021	September 2021	Q3 2021
Iran	Q3 2021	Q3 2021	Q3 2021
Iraq	Q2 2021	Q2 2021	2016
Kuwait	Q4 2020	Q4 2020	2021
Jordan	Q3 2021	October 2021	Q3 2021
Lebanon	Q4 2019	n/a	2018-2019
Libya	2014	n/a	2013
Morocco	Q3 2021	Q3 2021	Q3 2021
Oman	Q3 2021	n/a	2020
Qatar	Q3 2021	November 2021	Q2 2021
Saudi Arabia	Q3 2021	November 2021	Q3 2021
Syria	2019	n/a	2019
Tunisia	Q3 2021	September 2021	Q3 2021
United Arab Emirates	Q2 2020	n/a	2020
West Bank and Gaza	Q3 2021	November 2021	Q3 2021
Yemen	2017	n/a	2013

Note: n/a means information is not readily available. All data accessed as of January, 2022
This table is not exhaustive, it has only surveyed country Statistical Office Websites, Data Portal Websites (for countries that have this initiative linked to any of the mentioned websites), Central Bank Websites and Ministry of Planning/Economy/Finance websites. Third-party websites having data about said countries (from data providers) were not included in this survey. The table has been updated and verified by World Bank country economists.

Determinants of Absolute Growth Forecast Errors
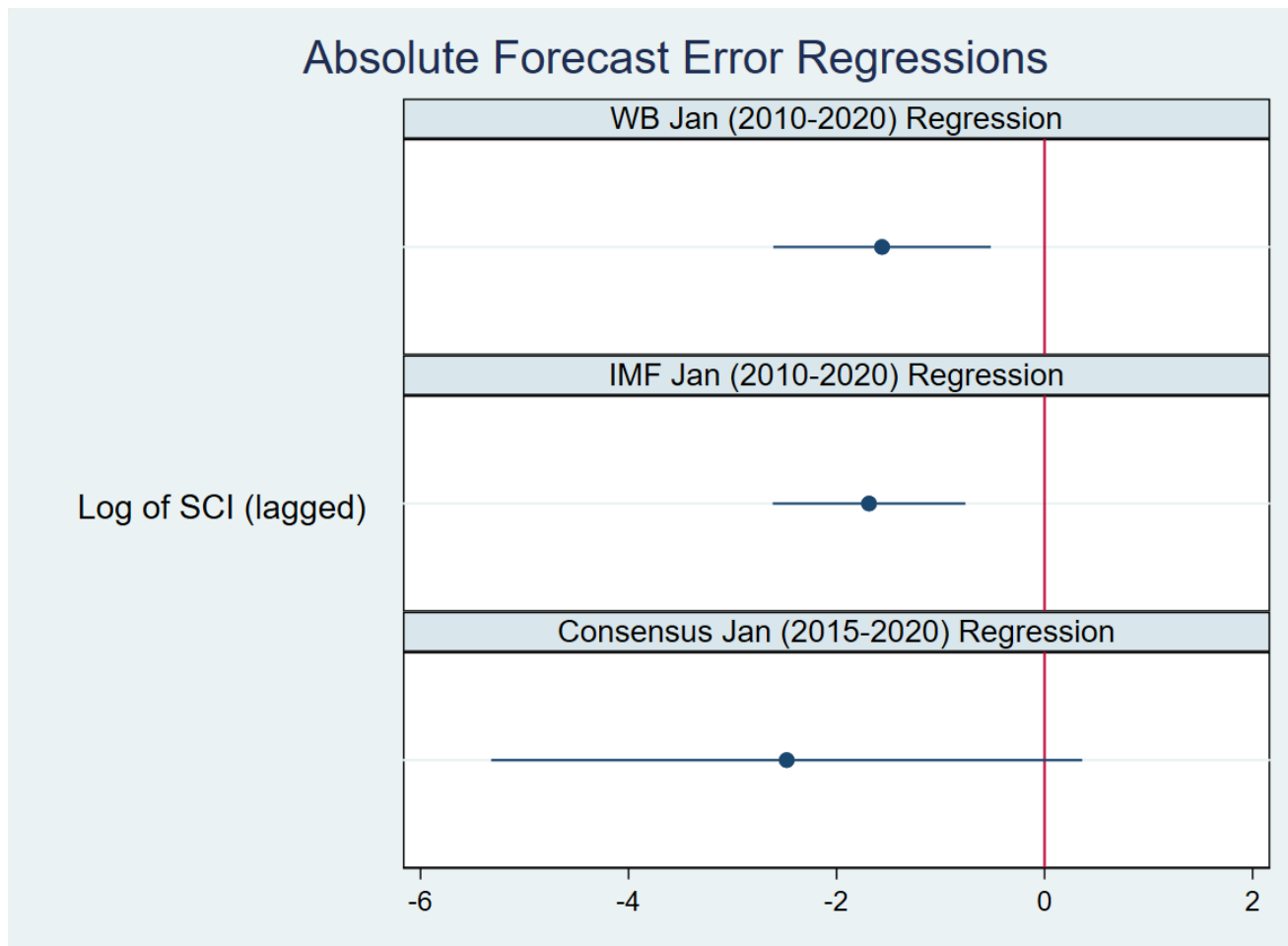
Control Variables:

- Growth volatility
- Log of GDP per Capita
- Commodity Price Shocks
- Internal Conflict
- Country Size (population)
- Economic booms/recessions
- Year Fixed Effects

Note: The WB-GEP sample includes 126 countries, the IMF-WEO sample includes 126 countries, and the Consensus sample includes 56 countries.

Recommendations on Data Transparency

High-frequency and better-quality of national accounts data

Better communication between ministries and the national statistical offices

Technical assistance to governments to improve national statistics

For countries in conflict, the availability of alternative data sources is valuable.

Conclusions:
Perils of and Solutions for Uncertain Forecasts

Latest growth forecast of 5.2 percent for MENA would be fastest rate since 2016, if it materializes.

Uncertainty reigns, but if what's past is prologue then expect forecasts to be uncertain and biased upwards.

Overly optimistic forecasts are perilous: Can lead to over indebtedness and future economic contractions.

Practical and low-cost solution: Data transparency, especially overall data ecosystem, seems empirically important for the accuracy of growth forecasts.

Thank You!