

BALANCING ACT: JOBS AND WAGES IN THE MIDDLE EAST AND NORTH AFRICA WHEN CRISES HIT

Roberta Gatti, Daniel Lederman, Nelly Elmallakh, Jesica Torres,
Joana Silva, Rana Lotfi, and Ilias Suvanov



Balancing Act: Jobs and Wages in the Middle East and North Africa When Crises Hit

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Abbreviations

ALMPs	Active Labor Market Policies
ATT	Average Treatment Effect on the Treated
CAPMAS	Central Agency for Public Mobilization and Statistics
CAS	Central Administration of Statistics
COVID-19	Coronavirus Disease 2019
CPI	Consumer Price Index
CY	Calendar year
DOE	Developing Oil Exporting countries
DOI	Developing Oil Importing countries
DOS	Department of Statistics
e	Estimate
EIA	US Energy Information Administration
EMBI	Emerging Market Bond Index
EMDE	Emerging Market and Developing Economies
ERF	Economic Research Forum
f	Forecast
FX	Foreign Exchange
FY	Fiscal year
GASTAT	General Authority for Statistics
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GOSI	General Organization of Social Insurance
HCP	Haut Commissariat au Plan (High Commission for Planning)

ILO	International Labor Organization
ILO STAT	ILO Department of Statistics
IMF	International Monetary Fund
INS	Institut National de la Statistique (National Institute of Statistics)
LCU	Local currency unit
LFS	Labor Force Survey
ME&CA	Middle East and Central Asia
MNA	Middle East and North Africa
MPO	Macro Poverty Outlook
N/A	Not available or not applicable
NIS	Israeli new shekel
OECD	Organization for Economic Co-operation and Development
OPEC+	Organization of the Petroleum Exporting Countries plus other oil-producing countries
PPP	Purchasing Power Parity
PSA	Planning and Statistics Authority
SCI	Statistical Centre of Iran
STEO	Short-Term Energy Outlook
UAE	United Arab Emirates
US	The United States of America
USD	United States dollar
WDI	World Development Indicators

Foreword: When the Emergency of Today Becomes Destiny

The popular uprising known as the Arab Spring. Armed conflict. Rising public debt. Sovereign default. COVID-19. The Russian invasion of Ukraine. Inflation. Rising interest rates. Ups and downs in the price of oil. Natural disasters. We have lived and are living in uncertain times for the global and regional economies, indeed. In the words of economists, these “shocks” are supposed to be temporary. But will they permanently scar the region’s most precious resource, its people? Although frustrating to hear, our Chief Economist and her coauthors tell us that it depends. I agree: whether the current macroeconomic uncertainty leaves permanent scars that alter the destiny of the people of the Middle East and North Africa (MENA) *does depend* on what we do today.

Balancing Act, the new edition of the *MENA Economic Update*, in continuity with *Altered Destinies*, the April 2023 edition of the *Update*, once again brings to our attention the long-lasting impacts of even transitory macroeconomic shocks. Once again, the report highlights the human side of the macroeconomic uncertainty that is currently permeating the global economy and, particularly, our region.

As with every edition of the MENA Economic Update, the authors assess the macroeconomic outlook of the region. The region is forecast to experience a sharp deceleration in growth in 2023, with varying growth patterns across oil exporters and oil importers in MENA. Successive oil production cuts from OPEC+ members combined with relatively low oil prices compared to mid-2022 brought an end to the tale of two MENAs and the diverging growth patterns observed between the developing oil exporters and the members of the Gulf Cooperation Council (GCC) on one hand and developing oil importers on the other. In 2023, growth is forecast to be higher in developing oil importers (3.6 percent) compared to developing oil exporters (2.4 percent) and to the GCC (1 percent). Improvements in the livelihoods of people in our region depend on growth in income per capita, which is forecast to decelerate overall in the region from 4.3 percent in 2022 to 0.4 percent in 2023. In other words, we are back where we started in the 21st century; MENA continues to be on an unacceptably low growth path. I ask once again, as I have during the past five years: if the region grows slowly with growth spurts followed by decelerations, how will the 300 million young people who will be knocking at the door of the labor market by 2050 find jobs with dignity?

Amid macroeconomic shocks we risk losing sight of what really matters. This report reminds us that the livelihood of people in MENA may be at stake. As we navigate the current economic context, which is marked by a heightened volatility in terms of trade stemming from Russia’s invasion of Ukraine, a global surge in interest rates, currency depreciations, and inflationary pressures, we should keep sight on what matters, which is the livelihoods of the people in our region.

As you delve into the findings of this report, you will likely find it eye-opening that labor markets in the MENA region exhibit similarities with those in other emerging market and developing economies (EMDEs). This evidence challenges the prevailing notion that MENA’s labor markets are fundamentally distinct from the global landscape; that we are somehow exceptional. Yet, the authors of this report shed light on specific dimensions where these labor market dynamics may indeed differ. A noteworthy dimension, we are told, is the response of unemployment during economic downturns, which in MENA is nearly double that of other EMDEs. Consequently, when negative shocks strike labor markets, the consequence is a higher number of unemployed individuals in MENA compared to their counterparts in other EMDEs.

The mission of *Balancing Act* is to guide us through the delicate balance labor markets must strike when facing economic shocks. As you navigate through this report, you will discover that when economic shocks strike without triggering inflation, it is unemployment that takes center stage as the primary margin of labor market adjustment in MENA. Whether it is the aftermath of the COVID-19 shock or the impact of adverse shocks to the terms of trade, the report underscores that in the MENA region, these shocks can potentially lead to an increase in the number of individuals finding themselves unemployed. The authors put forth a number worthy of remembering. Between 2020 and 2022, approximately 5 million jobs were lost. Youth fared worse than others.

This report sheds light on another crucial margin of labor market adjustment during periods of high inflation, the reduction in real incomes. It underscores how unemployment may be less responsive following currency devaluations, as the erosion of real wages takes center stage. An illuminating example from Egypt demonstrates the real-world impact, where workers were found to lose up to a fifth of their real wages after the currency devaluation of 2016.

Why should we care about these findings? The answer is quite simple. Our present concern and proactive engagement in shaping the right policies for immediate crisis responses are pivotal. Without proper policy reforms, we could inadvertently worsen the enduring structural challenges faced by MENA's labor markets as far as the eye can see. The report raises concerns about long-lasting negative consequences that may arise due to involuntary job displacements. As the authors highlight, people may face long-term negative penalties associated with job losses caused by temporary shocks. In Egypt, for example, men who were involuntarily displaced from their work due to firm shutdown or job termination by the employer have a greater likelihood of remaining unemployed or of being informally employed even 10 years post-job displacement. Labor scarring is real, it has been documented in the scientific peer-reviewed literature, we are told, and we should try to diminish employment losses.

The report, in turn, highlights the importance of preserving the flexibility of real wages during periods of adverse economic shocks, which can help reduce job losses, while simultaneously safeguarding the vulnerable segments of the population through well-targeted cash transfer programs. Reforms to the region's social protection systems are long overdue, as inefficient subsidies of the past have somehow gained momentum during these recent years of economic turbulence while the much more efficient and effective cash transfer programs are tiny when compared to the fiscal largesse that is deployed to offer consumption subsidies. The time for reform is now, because yesterday has passed.

I invite our audience to read this important report as it provides analyses of labor market adjustments in the region and in EMDEs during various shocks. As you delve into the pages of this technical report, you will realize that labor market conditions are not just numbers on a chart; they hold the power to shape our economic well-being and the very foundations of our society.

Ferid Belhaj

Vice President

Middle East and North Africa Region

The World Bank



CHAPTER 1 INTRODUCTION AND OVERVIEW OF FINDINGS

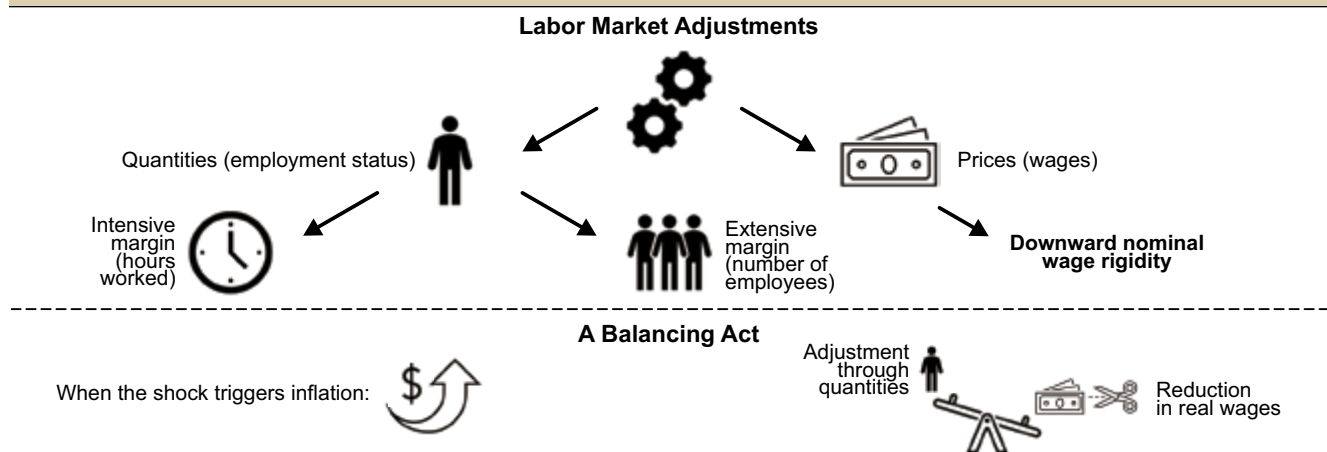
The structural challenges of labor markets have occupied a prominent place on the policy agenda of the Middle East and North Africa (MENA) for decades, but discussions about labor market adjustments to shocks have never held as much significance as they do today. As the region continues to recover from the impact of the COVID-19 shock and tries to navigate the heightened volatility in its terms of trade stemming from Russia's invasion of Ukraine, the region's people are contending with the ramifications for their livelihoods of the global surge in interest rates, the depreciation of currencies, and the resulting inflationary pressures. This report presents the World Bank's latest macroeconomic forecasts and explores the human side of the macroeconomic shocks brought about by the interconnected global events of the past four years by providing one of the very first systematic analyses of labor market adjustments to shocks in the MENA region. Given the macroeconomic prospects that lie ahead for MENA, the way labor markets respond to shocks will continue to hold paramount significance.

1.1 A balancing act when crises hit

Labor markets can adjust to shocks through changes in real wages; various employment margins (participation in the labor force, unemployment, informality, hours worked); and/or reallocation across firms, occupations, or industries. When real wages are sticky or rigid during economic downturns, adjustments to shocks in the labor market operate mainly through employment margins. When real wages are flexible, adjustments in unemployment, informality, and labor force participation are significantly diminished.

Nominal wages, however, tend to be sticky downward. Real wages can nevertheless adjust if the economic shock results in higher rates of inflation, thereby buffering the employment adjustment, as shown in figure 1.1.

Figure 1.1 The price versus quantity trade-off in labor market adjustments



Source: Authors' elaboration.

The balancing act involves navigating the trade-offs in the labor market when an economy confronts economic shocks that lead to a decrease in labor demand. One critical trade-off pertains to the declines in employment and decreases in real wages in inflationary environments, neither of which is desirable. Temporary job losses can have long-term negative repercussions on workers (referred to in the academic literature as *labor scarring*), and the erosion in real wages has dire implications in terms of standards of living and income inequality.

Policies that deal with the negative consequences of job separations, such as active labor market policies (ALMPs), have a mixed track record. In contrast, well-targeted cash transfers have been shown to be effective as a short-term crisis response to income losses. This report therefore advocates for maintaining the flexibility of real wages in times of negative shocks, to help diminish employment losses while protecting the vulnerable with well-targeted cash transfer schemes.

1.2 Regional growth prospects

MENA enjoyed extraordinarily rapid growth in 2022, boosted by the surge in oil prices. Economic activity in MENA is forecast to slow in 2023, with growth plummeting to just 1.9 percent, down from 6 percent in 2022. The extraordinary pace of growth in 2022 was driven by oil exporters in MENA, especially the member countries of the Gulf Cooperation Council (GCC), which grew more rapidly than and pulled ahead of oil importers. This divergence is projected to close in 2023 and 2024, bringing the tale of two MENAs to a halt.

In the GCC, growth in 2023 is projected to average 1 percent, notably less than the 7.3 percent rate in 2022. The deceleration is projected to be less marked among developing oil exporters, which are slated to grow by 2.4 percent, down from 4.3 percent in 2022. Among developing oil importers, average growth is forecast at 3.6 percent, down from 4.9 percent in 2022. In 2024, growth in MENA is expected to accelerate to 3.5 percent, without a large divergence between oil exporters and oil importers.

A better measure of living standards is real GDP per capita. Growth in real GDP per capita is projected to plummet to 0.4 percent in 2023, down from 4.3 percent in 2022. The slowdown is pervasive across country groups but more marked among oil exporters. In GCC countries, GDP per capita is forecast to fall by 1.5 percent, in stark contrast to the rate of growth of 4 percent in 2022. Among developing oil exporters, real GDP is forecast to grow at 1 percent, down from the 2.9 percent in 2022. Among developing oil importers, growth in GDP per capita is projected to fall from 3.7 percent in 2022 to 2.2 percent in 2023. By the end of 2023, 8 of 15 MENA economies will have returned to their pre-pandemic level of real GDP per capita.

1.3 The human side of macroeconomic shocks in MENA

This report compares labor markets in MENA with labor markets in other emerging market and developing economies (EMDEs) during economic contractions and expansions. It then provides in-depth analysis of three macroeconomic shocks: the COVID-19 shock, large currency devaluations, and negative terms-of-trade shocks (declines in a country's export prices relative to import prices).

The results show that, by and large, labor markets in MENA and other EMDEs adjust to shocks in similar ways. During downturns (when real GDP is below its long-term trend), labor force participation in both MENA and EMDEs declines, while unemployment and informality increase. Wages are also sticky downward in both country groups, that is, they tend to remain above their long-run trend during contractions.

Labor markets in MENA differ from labor markets in EMDEs in one critical dimension, however: During contractions, the response of unemployment in MENA is almost twice the response in EMDEs. The analysis suggests, for example, that as many as 5.11 million people in MENA may have been displaced because of the shocks during 2020–22, posing

long-term challenges for MENA labor markets. This difference in labor market response affects the design of policies to remedy the effects of large shocks on people's livelihoods.

However, when shocks are inflationary, unemployment tends to be less responsive; in some cases, unemployment may even decrease. Workers may find themselves sheltered from unemployment following large devaluations, for example, as employment levels remain relatively stable. Their purchasing power declines, however, as a result of the drop in their real incomes.

This type of adjustment took place during the 2016 currency devaluation in the Arab Republic of Egypt. As the Central Bank of Egypt ended foreign exchange controls and the managed float regime on November 3, 2016, the Egyptian pound witnessed a steep depreciation. In the fourth quarter of 2016, the year-on-year change in the nominal exchange rate (local currency units per US\$) stood at 87 percent. This sharp depreciation led to inflation of 30 percent in 2017. Unemployment rates did not surge. Instead, over the following six months, real wages declined by 10 percent. Fifteen months after the currency depreciation, real wages had fallen by 20 percent.

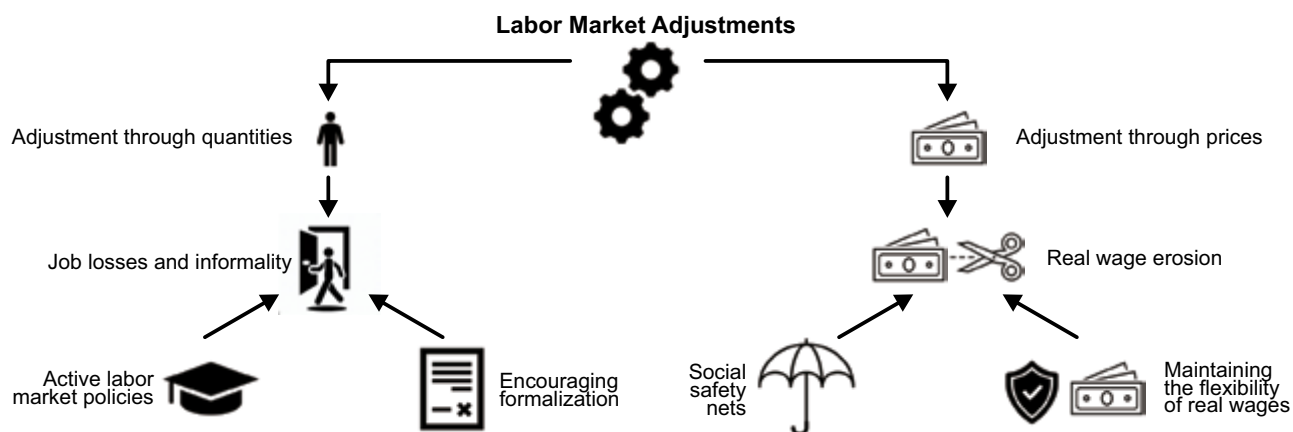
When shocks are not inflationary, unemployment is the main margin of adjustment in MENA. Following the COVID-19 shock, labor markets adjusted primarily through a reduction in employment and hours worked in MENA countries with low levels of inflation, a pattern that was common around the world. The COVID-19 MENA monitor surveys conducted by the Economic Research Forum (ERF) in November 2020 show that 29 percent of wage workers in Morocco and Tunisia reported experiencing a permanent or temporary layoff and 21 percent reported a decline in hours, but only 15 percent reported a decline in pay.

Labor market adjustments following negative terms of trade shocks tend to occur through changes in quantities; when trade terms deteriorate, more people can end up unemployed. The decrease in global oil prices in 2014/15 led to a decline in aggregate demand and downward pressure on prices. In the Islamic Republic of Iran, the unemployment rate rose by around 5 percent in the quarter following the shock and by up to 15 percent three quarters later, probably because real wages continued to increase.

1.4 Implications of the findings and policy options

During macroeconomic shocks, policy makers need to balance the risks of declines in employment against the risks of declines in real wages. Job displacement can affect workers' employment prospects, earnings potential, and overall career trajectories. Evidence on earning scarring—earnings losses that persist for several years after job separations—has been documented in both developed (Ruhm 1991; Jacobson, LaLonde, and Sullivan 1993; Pissarides 1992; Kroft, Lange, and Notowidigdo 2013; Filomena 2021) and developing (Arias and Lederman 2023) countries. This report provides evidence from Egypt suggesting that workers who were ever involuntarily displaced from their jobs (because of termination of the job by the employer, the suspension of the project, or a firm shutdown) have a significantly higher likelihood of being informally employed or unemployed even 10 years after the displacement than workers who were never involuntarily displaced.

The short-term erosion of real wages by high inflation raises different challenges. As highlighted in the April 2023 *MENA Economic Update*, the poorest households typically experience higher levels of inflation than the richest households (Gatti and others 2023), a difference that has dire implications for inequality. The policy toolkit offers different instruments to help remedy the effects from labor market shocks, as highlighted in figure 1.2. Not all of them have the same proven record of effectiveness, however.

Figure 1.2 Policy options for responding to labor market adjustments

Source: Authors' elaboration.

Policies that have been designed to improve employability of workers in the long run, often grouped under the term “active labor market policies” (ALMPs), have had mixed results. A review of the literature suggests that the type, duration, institutional design, and implementation of such programs are critical in determining their effectiveness (Card, Kluve, and Weber 2010, 2018; Brown and Koettl 2015; ILO 2022). Interventions aimed at inducing formalization also require further piloting as they have generally proved ineffective (Floridi, Demena, and Wagner 2020).

Given their track record, ALMPs are probably not the right policy instrument to deploy in the short term in response to major macroeconomic shocks. It is possible that ALMPs could be effective in addressing long-run, structural challenges facing labor markets in the region, but that important question lies well beyond the scope of this report.

In contrast to ALMPs, cash transfers have been shown to be an effective tool for responding to short-term crises (Haushofer and Shapiro 2016; Baird, McIntosh, and Özler 2011; Bastagli and others 2016; Egger and others 2022). They seem to be well suited for counteracting the negative consequences of declines in real incomes among poor and vulnerable families.

This report argues that the price adjustment channel should remain flexible during crises. If this margin of adjustment is closed, labor markets will adjust to shocks mainly through employment, possibly leading to long-term higher levels of informality. Policy makers must therefore resist the temptation to prop up wages and incomes as prices rise. Indexing public sector or private sector wages to the price level is likely to backfire, with long-lasting deleterious effects on the labor force. Public policies should aim at protecting vulnerable workers during shocks with cash transfers while allowing real wages to adjust.

An overarching question is how to finance the expansion of cash transfers (or ALMPs, if so decided by the authorities) in times of crises when fiscal savings shrink. This calls for the need of ex-ante fiscal savings in the form of emergency funds.

The rest of this report is organized as follows. Chapter 2 presents the macroeconomic outlook for the region. Chapter 3 presents the analytical framework and labor market responses in times of economic contractions and expansions. Chapters 4, 5, and 6 discuss labor market responses to the COVID-19 shock, large currency devaluations, and negative terms of trade shocks, respectively. Chapter 7 discusses the implications of the report’s findings on labor scarring and standards of living and presents some policy options.

CHAPTER 2 MACROECONOMIC OUTLOOK

Takeaways

- The World Bank expects the MENA region to grow by 1.9 percent in 2023, a third of the rate in 2022 (6 percent).
- Oil production cuts amidst a slowdown in global economic activity that is depressing oil prices will weigh adversely on the economic activity of MENA oil exporters. In the Gulf Cooperation Council, growth is projected to average 1 percent in 2023, a strong deceleration from the 2022 level of 7.3 percent. Growth among developing oil exporters in 2023 is projected at 2.4 percent, significantly less than the 4.3 percent in 2022.
- Among MENA oil importers, the ripple effects of the tightening of global financial conditions continue to constrain economic activity. Growth among these countries is projected at 3.6 percent in 2023, down from 4.9 percent in 2022.

2.1 Growth forecasts for the region

Economic activity in the Middle East and North Africa is forecast to decelerate sharply

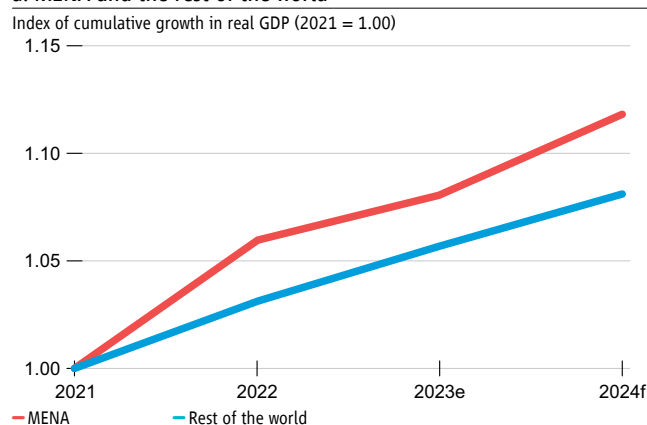
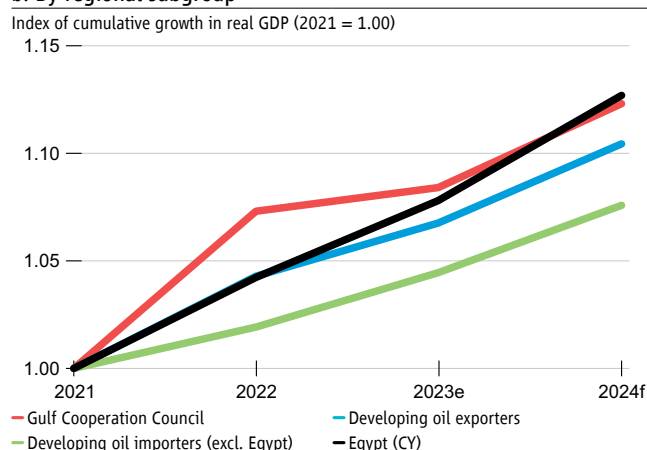
In contrast to the extraordinarily rapid growth in 2022, which was boosted by the surge in oil prices following Russia's invasion of Ukraine, economic activity in MENA is forecast to decelerate in 2023. World Bank economists forecast a rate of real GDP growth for the region of 1.9 percent in 2023 (table 2.1), down from 6 percent in 2022.

Projected growth in MENA in 2023 is closer to the global average, unlike in 2022, when the region dramatically outpaced the rest of the world (figure 2.1). Global activity is forecast to slow to 2.5 percent in 2023, down from 3.1 percent in 2022.¹ Slower growth globally reflects the tightening of monetary policy in advanced economies and numerous emerging markets (with lagged and ongoing effects on credit conditions), as well as the prolonged effects of the overlapping negative shocks of the pandemic and the war in Ukraine (Global Economic Prospects, June 2023). Inflation, which tends to reduce real aggregate demand, is also weighing adversely on global economic activity. In 2024, global growth is forecast to rebound slightly, to 2.3 percent.

In 2022, oil exporters in MENA, especially in the Gulf Cooperation Council (GCC), grew rapidly, outpacing oil importers except Egypt. This divergence is projected to close in 2023 and 2024, bringing the tale of two MENAs to a halt.

In the GCC, growth in 2023 is projected to average 1 percent, 2.2 percentage points less than forecast in the April 2023 *Economic Update* and considerably less than the 7.3 percent in 2022. Among developing oil exporters, the deceleration is less marked. Their expected growth in 2023 is 2.4 percent, less than the 4.3 percent in 2022. Among developing oil importers, the average forecast for 2023 is 3.6 percent, down from 4.9 percent in 2022.

¹ Source: Authors' calculations based on data from World Bank Macro and Poverty Outlooks, October 2023, for 186 economies.

Figure 2.1 Index of actual and projected cumulative real GDP growth in the Middle East and North Africa, 2021–24**a. MENA and the rest of the world****b. By regional subgroup**

Source: Authors' calculations, based on data from the Macro Poverty Outlook, October 2023.

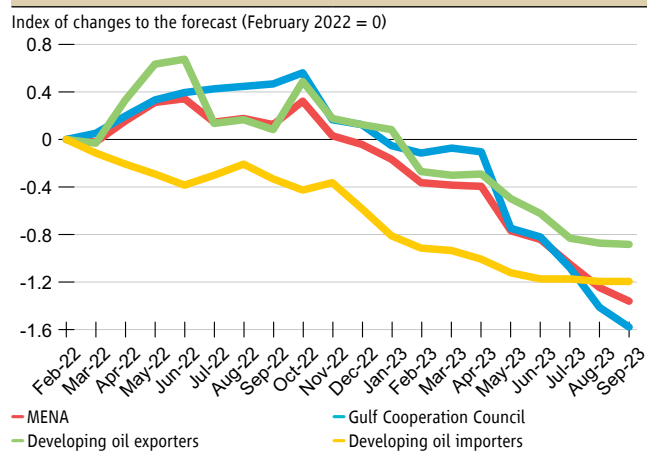
Note: MENA includes Algeria, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, the United Arab Emirates, and the West Bank and Gaza. The Gulf Cooperation Council includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Developing oil exporters include Algeria, the Islamic Republic of Iran, and Iraq. Developing oil importers excluding Egypt include Djibouti, Jordan, Morocco, Tunisia, and the West Bank and Gaza. Real GDP estimates for Egypt in panel b correspond to calendar years. Regional and subregional weighted-average real GDP growth rates were calculated using previous year real GDP levels as weights.

In 2024, growth in MENA is expected to accelerate to 3.5 percent, 3.6 percent among GCC economies, 3.4 percent among developing oil exporters, and 3.4 percent among developing oil importers.

Headwinds in global oil markets slowed growth among the region's oil exporters

Growth in MENA was projected to decelerate in 2023, reflecting both base effects as well as spillover effects from the global slowdown in economic activity. The 2023 forecast has been further revised downward in the past 12 months following the oil production cuts announced by OPEC+ in October 2022 and April 2023, and the additional cuts announced by Saudi Arabia in June 2023 (figure 2.2). Notably, after the announcement in April 2023, the average forecast among private sector analysts for 2023 fell sharply for GCC economies, with the average for MENA following suit. The trend in the private sector average 2023 forecast for GCC economies continued to deteriorate with Saudi Arabia's announcement in June. Private sector forecasts for developing oil exporters also changed after April 2023, but the revision was less marked than the change in forecasts for the GCC. Forecasts for developing oil importers continued a two-year downward trend.

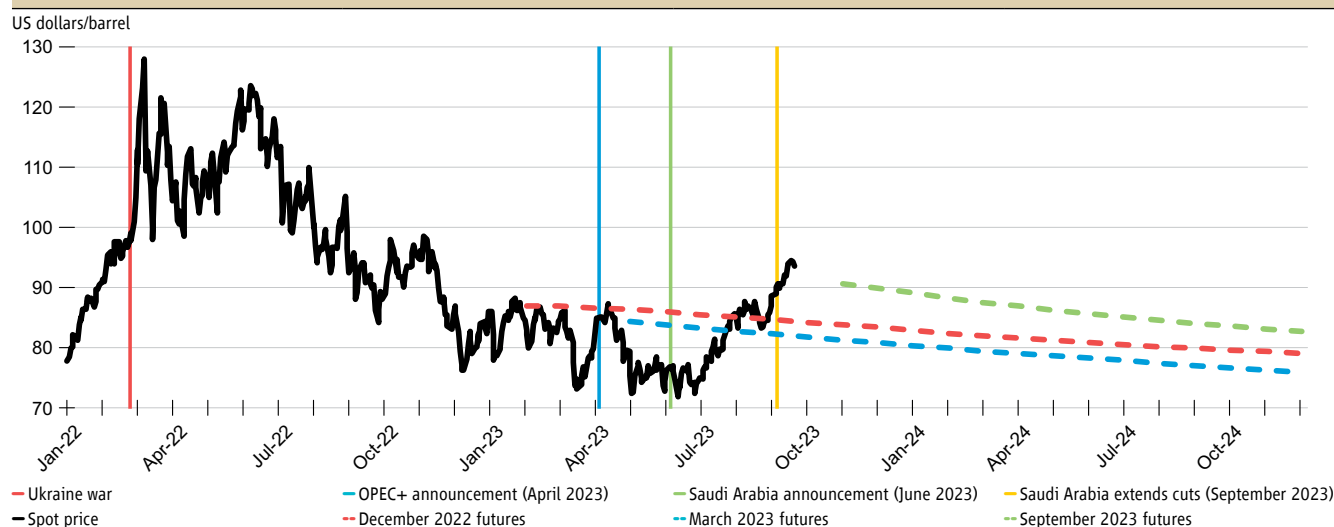
Despite production cuts, average oil prices for 2023 have not returned to the levels of 2022 (figure 2.3). As of September 20, 2023, the Brent crude oil spot price had jumped to US\$93.5 per barrel, but the estimated average

Figure 2.2 Index of changes in private sector forecasts of real GDP growth in 2023 in the Middle East and North Africa since February 2022

Source: Authors' calculations, based on data from Consensus Focus Economics Forecasts. Note: MENA excludes Djibouti, Libya, Syria, and the West Bank and Gaza, for which data were unavailable. The Gulf Cooperation Council includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Developing oil exporters include Algeria, the Islamic Republic of Iran, Iraq, and Yemen. Developing oil importers include Egypt, Jordan, Lebanon, Morocco, and Tunisia. Egypt's forecasted growth is transformed from fiscal year to calendar year (Egypt's fiscal year starts on July 1). For calendar year 2023, the forecast is the average of forecasted growth for FY22/23 and FY23/24. Average forecasted growth for each group is a weighted average of the country-level forecasted growth for 2023, using estimated 2022 real GDP as weights.

oil price for calendar year 2023 (based on spot and futures contracts) was US\$83.5, significantly lower than the average in 2022 (US\$100).² The increase in oil production in other countries, including the United States, might exert further downward pressure on global oil prices.³

Figure 2.3 Brent crude oil prices, January 2022–December 2023



Source: Authors' calculations, based on data from Bloomberg L.P.

Note: The black line indicates spot price of Brent crude oil as of September 20, 2023. The colored dotted lines illustrate the futures prices of Brent crude oil on December 1, 2022 and March 1, 2023 (as benchmarks) and September 6, 2023 (one trading day after Saudi Arabia's announcement).

As a result of lower oil production levels amidst subdued prices, economic activity in Saudi Arabia is projected to contract by 0.9 percent in 2023, an abrupt decrease from the 8.7 percent in 2022 (table 2.1). Growth in the remaining GCC economies is expected to also slow down sharply due to less favorable oil market prospects. In the United Arab Emirates, growth will plunge to 3.4 percent, down from 6.6 percent in 2022. In Oman, growth will plummet to 1.4 percent, down from 4.3 percent in 2022. Economic activity in the GCC is forecast to recover in 2024 under the assumption that OPEC+ production quotas are relaxed.

Among developing oil exporters, GDP growth in Iraq and Algeria is forecast to track the developments in global oil markets. In Iraq the forecast for 2023 has been updated to -2.3 percent, 5.1 percentage points less than the forecast in April 2023 and significantly less than the 7.0 percent observed in 2022. Similarly, in Algeria, growth is forecast to fall to 2.1 percent in 2023, down from 3.2 percent in 2022. In contrast, growth in the Islamic Republic of Iran is forecast to maintain a moderate pace at 4.1 percent in 2023, slightly higher from 3.8 percent in 2022.

In Libya, the floods in the plain of the Wadi Derna River on September 10–11, 2023, have caused unprecedented damage. The implications could be considerable (Box 2.1). At the time of writing, the World Bank had not yet completed a full assessment of the impact. Growth forecasts by World Bank economists for 2023 have not been downgraded due to the floods because preliminary information suggests that the effects of the floods on the hydrocarbon sector (which accounts for 60 percent of GDP) will be short-lived.

² Source: Authors' calculations based on data from Bloomberg L.P. The estimate for the average 2023 price is calculated using the spot price for the 22nd of each month between January and August 2023, the spot price for September 20, 2023, and futures from October 2023 through the end of the year (using a total of 12 data points for 2023).

³ On August 8, 2023, the US Energy Information Administration (EIA) published a press release stating that it "expects US crude oil production to surpass 12.9 million barrels per day for the first time in late 2023 and to exceed 13 million barrels per day in early 2024. In its August *Short-Term Energy Outlook* (STEO), EIA forecasts US crude oil production to average 12.8 million barrels per day in 2023, which is 200,000 barrels per day more than in its July forecast" (<https://www.eia.gov/pressroom/releases/press538.php>). In addition, more recent news articles have reported that oil production volumes in Iran have been increasing in the past months (for example, <https://www.reuters.com/business/energy/opec-oil-output-rises-august-iran-hits-2018-high-reuters-survey-2023-08-31/> and <https://www.bloomberg.com/news/articles/2023-08-22/iran-aims-to-boost-oil-output-complicating-opec-and-us-efforts?embedded-checkout=true>).

Table 2.1 Actual and projected real GDP growth, real GDP growth per capita, current account balance, and fiscal balance in the Middle East and North Africa, by economy, 2021–24

	Real GDP growth (percent)				Real GDP per capita growth (percent)				Current account balance (percent of GDP)				Fiscal balance (percent of GDP)			
	2021	2022	2023e	2024f	2021	2022	2023e	2024f	2021	2022	2023e	2024f	2021	2022	2023e	2024f
MENA	3.4	6.0	1.9	3.5	2.4	4.3	0.4	1.9	4.5	10.6	5.9	5.2	-3.3	2.2	-1.2	-1.1
Middle-income MENA	3.5	4.6	2.9	3.4	2.1	3.3	1.6	2.0	0.1	3.5	1.0	0.6	-4.4	-1.6	-4.0	-4.0
Oil exporters	3.1	6.2	1.5	3.5	2.4	4.4	-0.1	1.9	6.9	14.2	8.0	7.0	-2.3	4.1	-0.3	-0.2
GCC	3.2	7.3	1.0	3.6	4.6	4.0	-1.5	1.2	8.0	15.7	9.6	8.8	-2.4	4.9	0.8	1.1
Qatar	1.5	4.9	2.8	2.5	2.0	-1.7	1.5	1.5	14.7	26.6	16.1	13.3	0.2	10.3	6.1	5.3
United Arab Emirates	3.5	6.6	3.4	3.7	1.1	6.0	3.4	3.7	10.6	13.8	12.4	11.8	-1.4	9.0	5.2	4.6
Bahrain	2.7	4.9	2.8	3.3	3.7	4.2	1.9	2.4	6.6	15.4	7.8	6.6	-11.0	-6.0	-5.3	-4.5
Saudi Arabia	3.9	8.7	-0.9	4.1	6.5	4.0	-4.5	0.5	5.1	13.6	5.6	5.7	-2.3	2.6	-1.5	-0.1
Kuwait	1.3	7.9	0.8	2.6	3.9	7.4	-0.1	1.7	16.0	26.3	23.1	19.1	-7.3	2.2	-8.0	-10.7
Oman	3.1	4.3	1.4	2.7	3.6	3.0	0.0	1.2	-4.9	6.2	5.0	5.1	-3.2	7.2	6.0	5.7
Developing oil exporters	3.0	4.3	2.4	3.4	1.6	2.9	1.0	2.1	4.4	10.3	4.2	3.3	-2.1	2.1	-2.8	-2.9
Iran, Islamic Rep.	4.7	3.8	4.1	3.5	3.9	3.0	3.4	2.7	3.1	3.5	4.8	3.5	-3.2	-1.9	-1.6	-2.1
Algeria	3.4	3.2	2.1	2.5	1.7	1.6	0.5	0.9	-2.8	9.4	1.9	0.3	-7.2	-2.9	-6.8	-6.8
Iraq	-2.1	7.0	-2.3	4.3	-4.3	4.7	-4.5	2.0	13.2	22.6	5.0	5.4	4.4	12.8	-1.6	-1.4
Developing oil importers	4.3	4.9	3.6	3.4	2.8	3.7	2.2	1.9	-4.4	-4.4	-3.2	-3.5	-6.8	-5.9	-5.5	-5.7
Egypt, Arab Rep.	3.3	6.6	4.2	3.7	1.8	5.2	2.6	1.8	-4.3	-3.5	-2.8	-2.8	-7.1	-6.2	-6.0	-7.1
Tunisia	4.4	2.4	1.2	3.0	3.5	1.7	0.4	2.1	-6.0	-8.6	-4.0	-4.6	-7.6	-6.6	-5.6	-3.6
Jordan	2.2	2.5	2.6	2.5	0.2	1.3	2.1	2.1	-8.2	-8.7	-7.6	-5.9	-6.4	-5.8	-5.1	-5.0
Morocco	8.0	1.3	2.8	3.1	6.9	0.2	1.7	2.1	-2.3	-3.5	-1.3	-2.6	-6.0	-5.2	-4.6	-4.1
West Bank and Gaza	7.0	3.9	3.2	3.0	4.4	1.4	0.7	0.6	-9.8	-15.0	-13.8	-13.2	-5.8	-1.8	-2.5	-2.5
Djibouti	4.5	3.1	4.7	5.1	3.1	1.7	3.2	3.7	-0.7	-0.1	1.0	-0.8	-2.9	-1.5	-1.9	-1.4
Memorandum																
Libya	31.4	-1.2	14.1	4.1	29.8	-2.4	12.8	3.0	13.9	21.0	7.8	3.6	11.0	2.5	14.4	7.2
Lebanon	-7.0	-0.6	0.2	N/A	-5.8	1.2	0.7	N/A	-12.5	-32.7	-12.8	N/A	1.0	-2.9	-1.3	N/A
Syria	1.3	-3.5	-5.5	N/A	-1.3	-7.0	-9.9	N/A	N/A	N/A	N/A	N/A	-9.5	-8.4	-8.4	N/A
Yemen	-1.0	1.5	-0.5	2.0	-3.1	-0.7	-2.7	-0.2	-17.3	-16.5	-21.8	-13.5	-1.0	-2.8	-2.9	0.0

Source: Authors' calculations based on data from World Bank Macro and Poverty Outlooks, October 2023.

Note: e = estimate, f = forecast, N/A = not available. Data are rounded to a single digit. Data for Egypt correspond to its fiscal year (July–June). Lebanon, Libya, Syria, and Yemen are not included in the regional and subregional averages because of uncertainty about their forecasts; they appear as Memorandum countries. Middle-income MENA includes Algeria, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Jordan, Morocco, Tunisia, and the West Bank and Gaza. Oil exporters include Algeria, Bahrain, the Islamic Republic of Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The GCC includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Developing oil exporters include Algeria, the Islamic Republic of Iran, and Iraq. Developing oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia, and the West Bank and Gaza. Real regional and subregional GDP growth are weighted averages, calculated using previous year real GDP levels as weights. Real regional and subregional GDP per capita growth rates are weighted averages calculated from actual real GDP per capita for each economy (real GDP divided by population). Regional and subregional averages for the current account balance and fiscal balance were calculated using current year nominal GDP levels as weights. In the table, countries within each group are ranked by descending order by 2021 GDP per capita (constant 2017 purchasing power parity dollars).

Tighter global financial conditions contributed to currency depreciations among indebted oil importers in the region

Developing oil importers continue to grapple with the effects of the tightening of financial conditions across the world. The current accounts of oil importers in MENA were hit by shocks to the prices of oil and agricultural products from the war in Ukraine in 2022 (Gatti and others 2023). These shocks to their terms of trade hit at a time of elevated fiscal

Box 2.1 The potential macroeconomic effects of the recent natural disasters in Morocco and Libya

On September 8, 2023, a magnitude 7 earthquake struck Morocco with an epicenter in the High Atlas Mountain range, about 75 km southeast of Marrakech. As of September 13, 2023, the Ministry of Interior has reported a death toll of at least 2,946 individuals. The number of injured as of September 18 is almost 14,000, with more than 1,000 in critical condition. In the impacted zones, the earthquake caused substantial infrastructural damage, which could further compound the economic and societal impact of the earthquake.

On September 10–11, 2023, floods in Eastern Libya and the city of Derna, in particular, resulted in over 3,950 casualties, with 9,000 thousand still missing as of September 16. Livelihood losses could heighten poverty and internal displacement, with more than 880,000 individuals in need of humanitarian assistance and thousands of buildings and housing units sustaining damage.

At the time of writing, the World Bank had not yet completed a full assessment of the impact of these natural calamities. However, empirical evidence on the effect of disasters in developing countries would suggest a reduction in growth at the onset and an increase in indebtedness in the medium-term to finance the reconstruction. Fan and others (2023) examine 282 natural disasters (floods, earthquakes, droughts, storms, landslides, volcanic activity, extreme temperatures, and wildfires) between 1960 and 2019 in 86 developing countries where damages exceeded 1 percent of GDP. The authors compare the dynamics of public debt and economic growth in affected and non-affected economies (the control group) three years before and three years after the calamity.

Fan and others find that in the year of the disaster, GDP growth in affected economies is about 1.3 percentage points lower (compared to non-affected economies). GDP growth, however, tends to bounce back in the three years following the event, with growth 0.9 percentage points higher in the first year, 0.8 percentage points higher in the second year, and about 0.5 percentage points higher in year 3. On the other hand, public debt tends to accumulate after disasters (plausibly to finance the reconstruction). Growth in public debt jumps almost 2 percentage points in the year of the calamity, almost 4 percentage points in the first year after, and about 3 percentage points in years 2 and 3 (compared to the control group).

These results could be indicative of the potential macroeconomic consequences of the earthquake in Morocco and the floods in Libya, although the empirical regularities documented in Fan and others (2023) apply to disasters with severe damages (above 1 percent of GDP) and the full assessment of the impact in Morocco and Libya had not been completed at the time of writing.

vulnerabilities, in particular, high levels of debt to GDP.⁴ When advanced economies and other emerging markets tightened their monetary policies to rein in inflation, pressures on developing oil importers from capital outflows increased, which contributed to the depreciation of their currencies. Borrowing costs in indebted oil importers, in particular, have increased considerably, constraining their economic activity despite the improvement in their terms of trade when the shock to the price of commodities subdued in 2023.

In Egypt, policy rates practically doubled from 9.25 in February 2022 to 20.25 in September 2023 (figure 2.4). Medium-term yields on sovereign debt denominated in US dollars have increased by a factor of 5, from 3.4 percent on average in 2021 to about 17 percent in 2023.⁵ Lending rates almost doubled, from 9.4 percent in 2021 to about 17 percent in 2023.⁶ In Tunisia, while the increase in policy rates has been more moderate, medium-term yields on US dollar-denominated debt (the lion's share) doubled, from 10.4 percent on average in 2021 to about 21 percent in 2023.⁷

⁴ Terms of trade is the ratio of (an index of) export prices to (an index of) import prices.

⁵ Source: Authors' calculations based on data from Bloomberg L.P. Average USD-denominated bond yields as September 20, 2021 compared to corresponding bond yields as of September 20, 2023. Medium term US-denominated bond yields are defined as US-denominated yields maturing 2-4 years from reference date (i.e., for September 20, 2021, bonds considered matured from 9/20/2023 to 9/20/2025, and for September 20, 2023, bonds considered matured from 9/20/2025 to 9/20/2027).

⁶ Source: Authors' calculations based on data from the Central Bank of Egypt. Lending rates are a weighted average of interest rates for outstanding loans offered by 23 banks, whose deposits represent more than 80% of the banking sector's deposits. 2021 reflects the average of monthly lending rates for the year. 2023 reflects the average of the monthly lending rates from January to July of the year.

⁷ Source: Author's calculations based on Central Bank of Tunisia data. Policy rates in Tunisia increased from an average of 6.3 percent in 2021 to an annualized average of 8 percent in 2023. For the computation of the medium-term yields, see footnote 5.

Given the rise in borrowing costs, it is unsurprising that growth expectations in Egypt and Tunisia for 2023 have dampened relative to 2022. Moreover, currency depreciations in oil importers have been associated with rising inflation, as explained in section 2.2, which potentially has additional contractionary effects, as inflation tends to dilute households' real income, which in turn tends to reduce private consumption.⁸ Growth in Egypt is expected to slow to 4.2 percent in 2023, down from 6.6 percent in 2022, which was already a notable slowdown from growth rates hovering around 9.0 percent in the last two quarters of calendar year 2021. In Tunisia, growth is forecast at 1.2 percent, down from 2.4 percent in 2022.

In contrast, growth in Morocco is expected to pick up to 2.8 percent in 2023 from 1.3 of 2022. Morocco has been less affected by global macroeconomic shocks compared to other oil importers in the region as the improvement to its terms of trade brought about by the decline in oil prices in 2023 relative to 2022 has been much sharper, while the increase in borrowing costs has been more moderate. The policy rate is 3 percent, up from 1.5 percent in 2021 (figure 2.4). Lending rates have increased from 4.4 percent in 2021 to 5.1 percent in 2023, while medium-term yields on US dollar-denominated public debt hover at about 6 percent.⁹ The earthquake of September 8, 2023 resulted in tragic loss of lives and potentially modest economic losses in the most affected areas (Box 2.1). At the time of writing, the World Bank had not yet completed a full assessment of the impact of the earthquake. World Bank economists forecast that the earthquake will have moderate macroeconomic impact since preliminary information suggests that potential disruptions on tourism, for example, will be temporary.

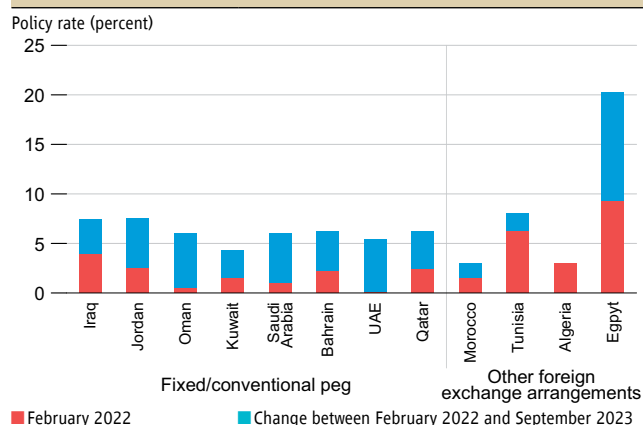
Pressures on fiscal and current accounts are lingering among developing oil importers

Cuts in oil production and subdued oil prices are depressing the current accounts and fiscal balances of MENA's oil exporters. In the GCC, the current account balance is projected to fall to 9.6 percent of GDP, down from a high of 15.7 in 2022. The fiscal surplus is forecast to sharply decrease to 0.8 percent of GDP from 4.9 percent in 2022.

Developing oil exporters' current account balances are also expected to fall from an average of 10.3 percent of GDP in 2022 to 4.2 percent in 2023. Their fiscal balances will move into deficit territory, to -2.8 percent of GDP, down from a surplus of 2.1 percent in 2022.

In contrast, developing oil importers' current accounts are forecast to increase, from a deficit of -4.4 percent of GDP in 2022 to a deficit of -3.2 percent in 2023, boosted in part by the decline in the price of oil and perhaps by currency depreciations and consequent decelerating demand for imports. Aggregate imports for this group are expected to decline by 6.9 percent relative to 2022 (but increase by 0.2 percent excluding Egypt). The group's fiscal balance is

Figure 2.4 Policy rates in the Middle East and North Africa in February 2022 and change in rates between February 2022 and September 2023



Source: Authors' calculations, based on data from Central Bank websites.

Note: Change between February 2022 and September 2023 policy rates are expressed as a percentage point difference. The data corresponds to overnight (O/N) lending rates in Egypt and Qatar; O/N deposit in the UAE; Discount rate in Kuwait; Main Rate in Algeria, Iraq, Jordan, Morocco, and Tunisia; Repo rate in Oman and Saudi Arabia, and 1-Week Deposit Rate in Bahrain.

⁸ In Egypt, the oil importer exhibiting the highest rate of inflation, World Bank economists forecast that real consumption growth will decline from 6.2 percent in fiscal year 2021 to 3.6 percent in fiscal year 2023. Similarly, growth in real consumption in Morocco is forecast to decelerate from 6.9 percent in 2021 to 1 percent in 2023. Private consumption includes consumption of non-profit institutions serving households, which tends to increase during downturns to help households smooth out shocks.

⁹ Source: Authors' calculations based on data from Central Bank of Morocco for the policy and lending rates and Bloomberg L.P. for the yields on public debt. 2021 lending rates are average quarterly lending rates for the year, while 2023 lending rates are average Q1 and Q2 rates for 2023. On the computation of medium-term yields, see footnote 5. For Morocco there is only one bond covered in the Bloomberg data.

forecast to remain unchanged, although pressures to their fiscal and current accounts linger as government borrowing costs continue to rise.

Real GDP per capita growth is tepid in the region

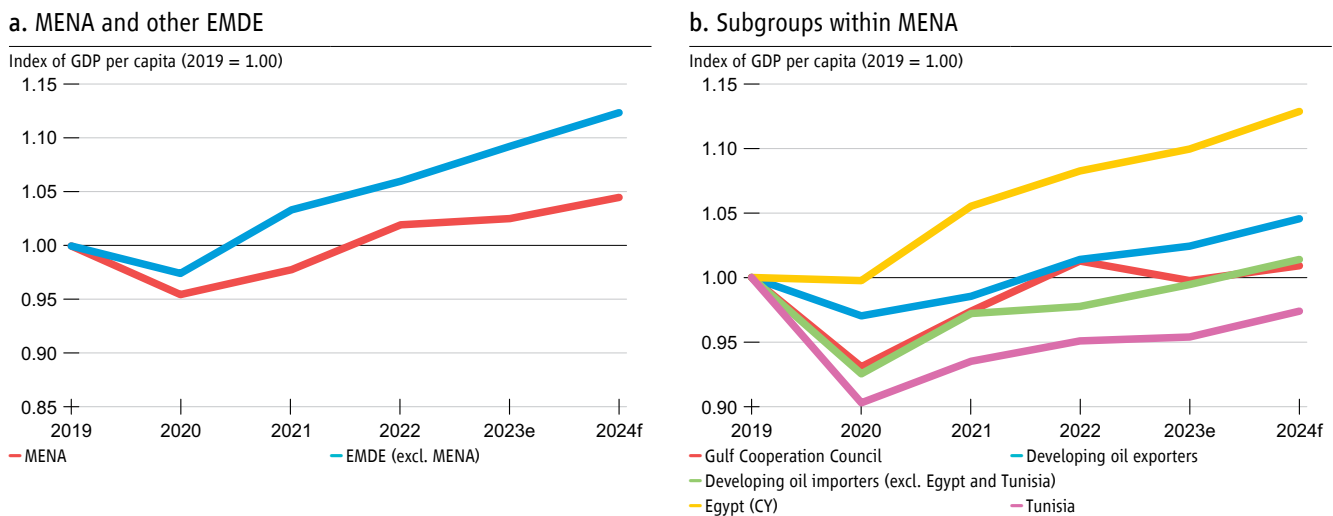
Changes in real GDP per capita more accurately reflect changes in living standards than changes in total GDP. Regional growth in real GDP per capita in 2023 is expected to plummet to 0.4 percent, down from 4.3 percent in 2022 (table 2.1). The slowdown in per capita growth is pervasive across country groups but more marked among oil exporters.

In GCC countries, GDP per capita is forecast to contract by 1.5 percent, significantly less than the extraordinary rate of 4 percent achieved in 2022. The lowest rates in this group are for Saudi Arabia, where growth in real GDP per capita is forecast to slow to -4.5 percent; Kuwait, where GDP per capita will contract by 0.1 percent; and Oman, where real GDP is forecast to barely keep up with population growth.

Among developing oil exporters, real GDP per capita is forecast to grow at 1 percent. At one extreme in this group, growth in real GDP per capita in the Islamic Republic of Iran is forecast at 3.4 percent, a moderate increase from 3.0 percent in 2022. At the other extreme, growth in real GDP per capita in Iraq is projected to fall to -4.5 percent, markedly less than the 4.7 percent increase in 2022. In Algeria, growth in real GDP per capita is forecast at 0.5 percent for 2023, down from 1.6 percent in 2022.

Growth in GDP per capita is also expected to decelerate in developing oil importers, falling from 3.7 percent in 2022 to 2.2 percent in 2023. In Egypt, growth in real GDP per capita is forecast to decelerate to 2.6 percent in fiscal year 2023 from 5.2 percent in fiscal year 2022 (from 2.6 percent in calendar year 2022 to 1.6 percent in calendar year 2023). In Tunisia, growth in real GDP is forecast to barely keep up with population growth, down from 1.7 percent in 2022. The outlook is better in Jordan and Morocco, where growth in real GDP per capita is forecast to rebound to 2.1 and 1.7 percent in 2023, respectively.

Figure 2.5 Index of cumulative growth in real GDP per capita in the Middle East and North Africa, 2019–24



Source: Authors' calculations, based on data from the Macro Poverty Outlook (MPO), October 2023.

Note: MENA includes Algeria, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, the United Arab Emirates, and the West Bank and Gaza. Emerging Markets and Developing Economies excluding MENA (EMDE excl. MENA) includes 150 countries. Countries are excluded due to lack of data in the MPO. The Gulf Cooperation Council includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Developing oil exporters include Algeria, the Islamic Republic of Iran, and Iraq. Developing oil importers excluding Egypt and Tunisia include Djibouti, Jordan, Morocco, and the West Bank and Gaza. Real GDP estimates for Egypt in panel b correspond to calendar years. Weighted-average regional and subregional real GDP per capita growth rates were calculated based on actual real GDP per capita for each category (real GDP divided by population).

By the end of 2023, only 8 out of 15 MENA economies will have returned to their pre-pandemic level of real GDP per capita (figure 2.5). Economies in which GDP per capita will be below 2019 levels include Jordan (0.17 percent below 2019 levels); Qatar (0.3 percent below 2019 levels); Algeria (3.3 percent below 2019 levels); Saudi Arabia (3.6 percent); Tunisia (4.6 percent); the West Bank and Gaza, (7.7 percent); and Iraq (15.3 percent). These gaps are projected to close by the end of 2024 only in Jordan and Qatar.

2.2 Inflation

Globally, inflation continues to ease, although it remains above its pre-pandemic level. In MENA, inflation is subsiding among GCC economies and developing oil exporters (table 2.2). Among developing oil importers, exchange rate depreciations continue to feed inflationary pressures. In the Arab Republic of Egypt, inflation in fiscal year 2023 is forecast to reach 24 percent, almost three times the rate in fiscal year 2022 (8.5 percent). In August 2023, headline year-on-year inflation reached 39.7 percent.¹⁰

Figure 2.6 shows back-of-the-envelope calculations of the contribution of currency depreciations to headline inflation in MENA economies where the currency depreciated since February 2022.¹¹ In Egypt, where the value of US dollars in Egyptian pounds increased by 97 percent between March 2022 and August 2023, year-on-year inflation averaged 24 percent in that same period, while the inflation rate adjusted for changes in the exchange rate averaged approximately -6 percent. This adjustment is the (counterfactual) rate of inflation had the exchange rate remained at its February 2022 levels and everything else—including the imposition of domestic price ceilings for various commodities and increases in subsidies for food—occurred anyway. In Egypt (and in the West Bank and Gaza and Lebanon), depreciation of the local currency had a substantial effect on inflation.¹²

Table 2.2 Inflation in the Middle East and North Africa, by economy, 2021–24

Percent				
	2021	2022	2023e	2024f
Middle East and North Africa	2.3	5.0	3.3	2.4
Gulf Cooperation Council	1.9	4.0	2.8	2.2
Qatar	2.3	5.0	3.0	2.2
United Arab Emirates	-0.1	4.8	3.3	2.2
Bahrain	-0.6	3.6	2.3	2.2
Saudi Arabia	3.1	2.5	2.6	2.3
Kuwait	3.4	4.3	3.3	2.4
Oman	1.5	2.8	1.3	1.8
Developing oil exporters	7.2	9.3	9.3	8.6
Iran, Islamic Rep.	46.2	46.5	42.6	35.8
Algeria	7.2	9.3	9.3	8.6
Iraq	6.0	5.0	4.8	4.0

¹⁰ Source: Central Bank of Egypt (not seasonally adjusted series).

¹¹ See Belhaj and others (2022) for details on the accounting framework used to calculate the contributions of currency fluctuations to headline inflation. In brief, the calculations rely on the small open economy assumption, which postulates that such economies are price takers of global prices of tradable goods, which are usually globally denominated in dollars. The calculations assume that the pass-through of currency depreciations to the domestic tradable price level is one for one. The pass-through to headline inflation is imperfect, however, because tradable goods account for less than 100 percent of domestic consumption baskets.

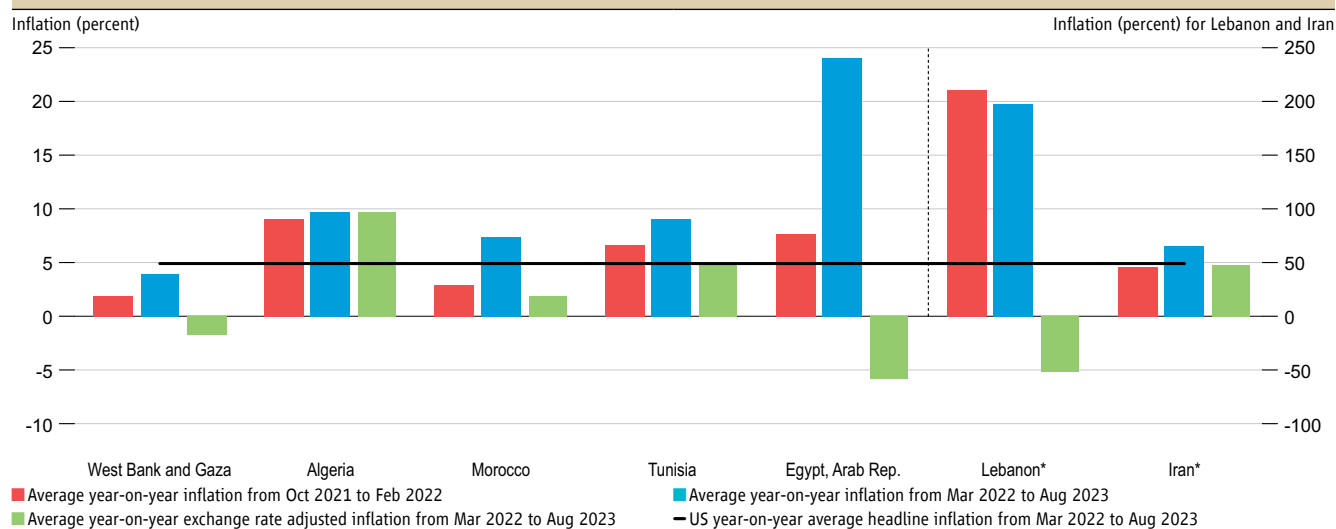
¹² This analysis does not compare the desirability of fixed exchange rate regimes relative to regimes with a flexible exchange rate. In fact, there are economies in the region that have maintained fixed exchange rate regimes without running out of reserves, but it is arguable whether these countries should continue to maintain their peg to the US dollar. In many instances, flexible exchange rates are likely to be superior to fixed rates.

Table 2.2 Inflation in the Middle East and North Africa, by economy, 2021–24

Percent				
Economy or group of economies	2021	2022	2023f	2024f
Developing oil importers	1.5	5.9	5.0	3.4
Egypt, Arab Rep.	4.5	8.5	24.1	26.7
Tunisia	5.7	8.3	9.2	8.0
Jordan	1.3	4.2	2.4	2.4
Morocco	1.4	6.6	6.2	3.8
West Bank and Gaza	1.2	3.7	3.8	3.0
Djibouti	1.5	5.1	2.0	2.0
Memorandum				
Libya	2.8	4.6	2.4	2.4
Lebanon	150.0	171.2	231.3	N/A
Syria	118.8	60.6	62.1	N/A
Yemen	31.5	29.5	14.9	17.3

Source: Macro Poverty Outlook, October 2023.

Note: f = forecast, N/A = not available. Regional and subregional figures are based on the median of the countries in each group. Data are rounded to a single decimal place. In the case of Egypt, data corresponds to fiscal years. In the table, countries within each group are ranked by descending order by 2021 GDP per capita (constant 2017 purchasing power parity dollars).

Figure 2.6 Inflation in the Middle East and North Africa after adjusting for exchange rate fluctuations, by economy

Source: Authors' calculations, based on data from Haver Analytics, national statistical offices, and Bloomberg LP.

Note: The green bars show what the average year-on-year inflation rate would have been had each country's bilateral exchange rate with the US dollar remained at its February 2022 level. Countries are displayed in ascending order of 2021 GDP per capita (constant 2017 purchasing power parity dollars) within categories. Foreign exchange rate changes (changes in the value of USD in local currency) are calculated using 1st trading day of each month in the data (i.e., foreign exchange rate changes between February 2022 and August 2023 would be between 2/1/2022 and 8/1/2023). In Algeria, Morocco, and Lebanon the last data point corresponds to July 2023.

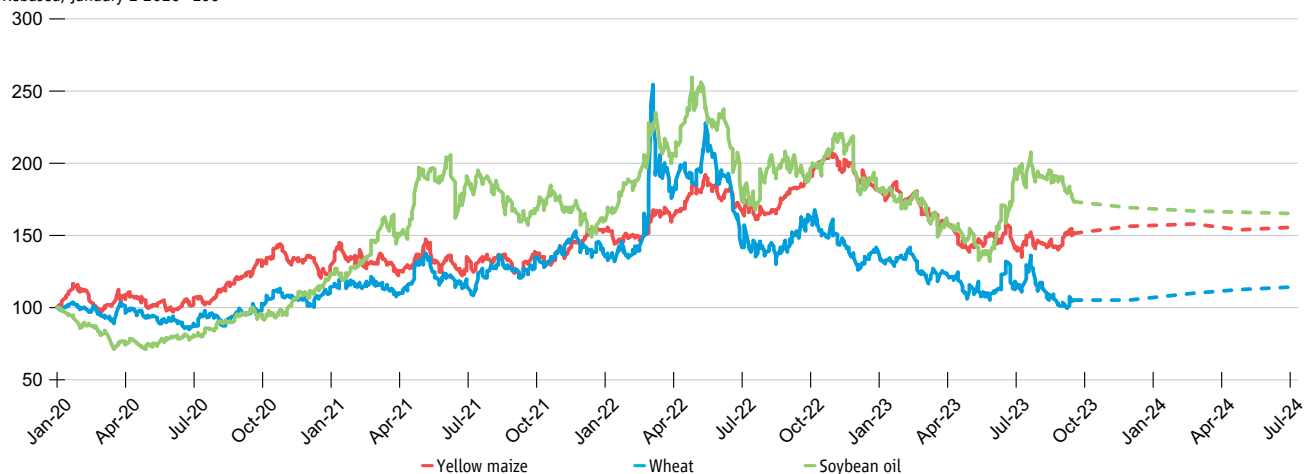
Food price inflation reduces food security, especially among the most vulnerable households (Gatti and others 2023). Pressures on domestic inflation from food prices remain elevated. The World Bank global food price index was 44 percent higher in August 2023 than in June 2019. Prices of agricultural commodities (wheat, corn, and vegetable oils) steadily decreased in the first half of 2023, but their volatility increased in the summer of 2023, and the price of edible oils in particular rose significantly (figure 2.7). Prices of yellow maize and soybean oil are expected to remain above pre-pandemic levels through 2024.

In domestic currency, food inflation in the region is likely to remain elevated as a result of the continuing pressures on MENA economies' currencies. In Egypt, year-on-year food inflation reached about 72 percent in August 2023. In

Tunisia and Morocco, food inflation remains high at 15 and 11 percent, respectively. These rates of food inflation are significantly higher than headline inflation, and disproportionately hurt the poorest and most vulnerable households, who tend to spend a larger share of their income on food products.

Figure 2.7 Index of global prices of yellow maize, wheat, and soybean oil, January 2020–July 2024

Rebased, January 2 2020=100

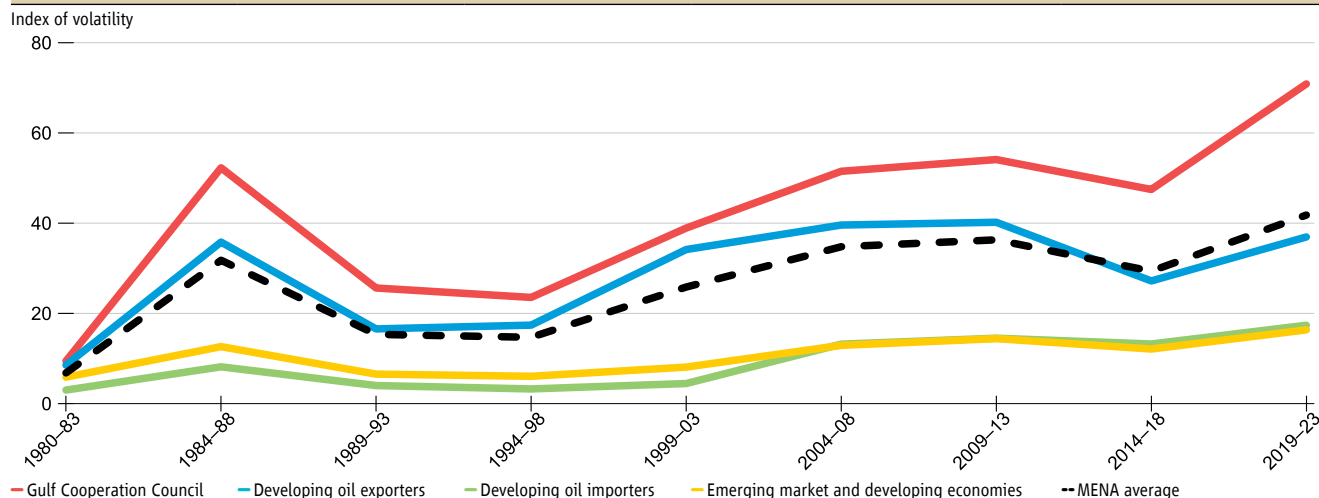


Source: Authors' calculations, based on data from Bloomberg LP.
Note: Solid lines indicate spot prices as of September 20, 2023; dotted lines show futures prices.

2.3 Terms of trade since the COVID-19 shock

It is difficult to exaggerate the macroeconomic and developmental consequences of fluctuations in the prices of exports and imports for MENA countries that have occurred since 2019. The shocks to oil prices from the effects of the COVID-19 pandemic and the Russia's invasion of Ukraine resulted in dramatic shocks to the terms of trade. In April 2020, when the price of oil reached around US\$20 per barrel, the terms of trade deteriorated for oil exporters and improved for oil importers. As oil price recovered in 2020, the terms of trade among oil exporters recovered, peaking at around June 2022, when oil prices averaged around US\$120 per barrel. The terms of trade among developing oil importers followed the opposite trajectory. As the war-induced surge in oil prices eased in the second half of 2022 and through 2023, the terms of trade have been deteriorating for MENA oil exporters and improving for oil importers.

These terms-of-trade shocks have resulted in high volatility in the terms of trade in the region, especially among GCC economies. Figure 2.8 shows the volatility in commodity terms of trade for the GCC, developing oil exporters, and developing oil importers in MENA since 1980. This index includes energy, metals, and agricultural products but closely mirrors other measures that include the prices (unit values) of exports and imports of manufactured goods. Volatility in terms of trade among oil exporters in the region is more than twice as high as the average among emerging market and developing economies in the rest of the world. Among GCC economies, terms-of-trade volatility reached an all-time high with the shocks from the COVID-19 pandemic and the Russian invasion of Ukraine. Among developing oil exporters and importers, volatility is comparable to levels observed in the mid-1980s and around the global recession of 2007–09.

Figure 2.8 Index of terms-of-trade volatility in the Middle East and North Africa, 1980–2023

Source: Authors' calculations based on data from the Commodity Terms of Trade database of the IMF (Gruss and Kebhaj 2019).
 Note: The figure shows the average volatility within each 5-year period for each group. Volatility is defined as the difference between the maximum and the minimum shock to terms-of-trade. Shocks are computed as the percentage difference relative to the month before. The estimation of the mean controls for population size. The data covers from January 1980 through February 2023. MENA includes Algeria, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, the United Arab Emirates, and Yemen. Emerging Markets and Developing Economies excluding MENA (EMDE excl. MENA) includes 127 countries. The Gulf Cooperation Council includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Developing oil exporters include Algeria, the Islamic Republic of Iran, Iraq, Libya, Syria, and Yemen. Developing oil importers include Djibouti, Egypt, Jordan, Lebanon, Morocco, and Tunisia.

Figure 2.9 Correlation between unemployment rates and GDP per capita, by country income level, 2022

Source: Authors' calculations based on data from ILO STAT and the World Bank WDI.
 Note: The income category for each country follows the World Bank's classification. The unemployment rate corresponds to 2022 or latest year available for MENA countries.

This turbulence in the terms of trade since 2020 hit MENA at a time of elevated fiscal vulnerabilities among oil-importing middle-income economies, which contributed to the depreciation of their currencies. Currency depreciations in turn led to high rates of inflation, which can have far-reaching consequences on the livelihoods of families and children. Of relevance to this report's focus on labor market outcomes, elevated inflation is directly associated with the erosion of real wages. At the same time, as real wages adjust downward because of high inflation, firms may not need to reduce employment by laying off workers or reducing their working hours during a macroeconomic downturn. Inflation can thus ease labor market adjustments in times of macro-financial turmoil, albeit with deleterious consequences for the purchasing power of households. Understanding the way labor markets adjust to shocks is particularly relevant in MENA, which has long had higher rates of unemployment than its income peers (figure 2.9 and appendix).

Job displacement can affect the employment prospects, earnings potential, and career trajectories of the unemployed, as chapter 3 shows. Identifying the margins of flexibility that are missing in MENA labor markets is key to designing policy responses to economic shocks that will mitigate the potential long-term scarring of previously employed workers. Given the recent saliency of currency depreciations, terms of trade shocks, and the Covid shock, understanding how these macroeconomic phenomena have affected the livelihoods of the hard-working people of MENA is critical. The following chapters therefore provide deep dives into the reactions of labor markets to these shocks in MENA and the rest of the world.

CHAPTER 3 HOW DO LABOR MARKETS RESPOND TO SHOCKS?

Chapter 3 takeaways:

- Labor markets adjust through changes in quantities (employment status) or prices (wages).
- In the context of low inflation, labor markets tend to adjust through changes in employment, because of the presence of downward nominal wage rigidities.
- Inflation can ease labor market adjustments by speeding the decline in real wages in times of shocks.
- Negative economic shocks are associated with larger increases in unemployment in MENA than the average for emerging market and developing economies.
- The macroeconomic shocks of 2020–22 led to an additional 5.1 million individuals becoming unemployed in MENA.
- Real wages in the region are countercyclical and exhibit more downward rigidity than the average for emerging market and developing economies.
- Other margins of adjustment in the labor market exhibit the same sensitivity to economic shocks as other emerging market and developing economies.

Economic, political, and social disruptions can have far-reaching consequences on labor markets, affecting employment, informality, wages, and livelihoods. Understanding how labor markets adjust and respond to shocks—such as the COVID-19 pandemic, major currency devaluations, and negative changes in the terms of trade—is crucial for policy makers, businesses, and individuals especially in the current context of overlapping crises.

In the Middle East and North Africa, a region characterized by a young population but a limited creation of quality jobs, analyzing how labor markets adjust to shocks and who bears the brunt of this adjustment can help rethink policy to support more resilient economies and societies.¹³

3.1 Trade-offs in labor market adjustments

Like other markets, labor markets adjust through changes in quantities (employment status) and prices (wages). Adjustments through quantities occur when firms change the number of employees (extensive margin) or hours worked (intensive margin). Adjustments through prices occur when firms increase or decrease wages.

Although all three channels are theoretically plausible, the empirical evidence suggests that firms rarely change nominal wages in the face of crises, adjusting instead through quantities.¹⁴ This evidence patterns the original intuition at the heart of John Maynard Keynes' analysis of the labor market during economic cycles and its key assumption of nominal wage downward rigidity (Keynes 1936).

¹³ See Islam, Moosa, and Saliola (2022).

¹⁴ See, for example, Kaur (2019) and Erten, Leight, and Tregenna (2019).

Several papers document nominal wage rigidities in advanced and developing economies. In her study of wages and employment responses to rainfall shocks in India, which shift demand for agricultural labor, Kaur (2019) finds evidence of significant downward nominal wage rigidity. In South Africa, Erten, Leight, and Tregenna (2019) find that districts exposed to tariff reduction experience declines in both formal and informal employment in the tradable sector without any significant effect on wages. Castellanos, García-Verdú, and Kaplan (2004) find significant downward nominal wage rigidities in Mexico.¹⁵

The evidence is less clear cut on whether adjustment through quantities occurs through changes in employment levels or changes in hours worked. Providing evidence from 14 countries in the Organisation for Economic Co-operation and Development (OECD), Ohanian and Raffo (2012) show that both margins of adjustment are equally important. They show that during the Great Recession (2008–09), changes in hours were about as large as changes in employment. Similarly, Taskin (2013) finds that both margins of adjustment were significant in Türkiye and the United States using data from 1955 to 2012. Burda and Hunt (2011) find that the little employment loss in Germany during the Great Recession can be partly attributed to adjustment along the intensive margin. Khanna, Newhouse, and Paci (2011) review evidence on labor market adjustments in 44 middle-income countries after the financial crisis of 2008, which they show affected both employment and hours of work.

Labor market regulations and institutions play a crucial role in determining the significance of the extensive and intensive margins of adjustment. A large informal sector reduces hiring and firing costs, which may encourage firms to adjust along the extensive margin (Taskin 2013). Tight labor market regulations, such as strict employment protection, make extensive margin adjustment more costly for firms, possibly slowing the speed of adjustment of employment to shocks (David, Pienknagura, and Roldos 2020).

Labor markets may also adjust through shifts across labor market segments, such as shifts between the formal and informal sectors. Evidence from Latin America suggests that the informal sector may indeed act as a buffer for employment during periods of economic downturns, as entry costs are significantly lower in informal than in formal employment (Arias and others 2018). Using data since the late 1990s, David, Lambert, and Toscani (2019) find that informality dampens changes in unemployment accompanying output fluctuations in Latin America.

3.2 Margins of adjustment in low- and high-inflation contexts

The margins of adjustment in labor markets depend on whether shocks occur in low- or high-inflation contexts, because inflation can affect the behavior of workers and firms. As real wages adjust downward when inflation is high, firms may not need to reduce employment by laying off workers or reducing their working hours. Inflation can thus ease labor market adjustments by speeding the decline in real wages in times of shocks. According to this hypothesis, as formulated by Tobin (1972), high levels of inflation “grease the wheels” of the labor market, reducing frictional unemployment.¹⁶

In contrast, in periods of low inflation, nominal and real wages remain relatively stable and firms may be limited to making adjustments through quantities, such as reducing their workforce to reduce labor costs. A low-inflation context thus likely heightens the degree to which labor markets adapt to crises through employment adjustments.

¹⁵ While not denying the existence of such rigidities, Elsby and Solon (2019) provide evidence from various countries suggesting that wage cuts may affect 15–25 percent of job stayers in periods of low inflation.

¹⁶ Frictional unemployment refers to the unemployment that occurs when individuals are temporarily unemployed as they transition between jobs or careers. It is a natural and unavoidable aspect of a dynamic economy, in which people move in and out of the workforce or change jobs for various reasons.

Using data from the United States, Card and Hyslop (1997) study whether real wage adjustments are more likely to occur in higher-inflation environments. They find a strong negative association between the share of workers with rigid nominal wages and the inflation rate, with each percentage point reduction in inflation associated with a 1.4 percentage point increase in the incidence of nominal wage rigidity. Loboguerrero and Panizza (2005) show that Latin American countries adjust to shocks more through wages than through changes in employment. They argue that inflation plays a significant role in accounting for the difference in the employment elasticity between Latin America and industrial countries.

3.3 Margins of adjustment to macroeconomic shocks in the Middle East and North Africa

In the past three years, especially since February 2022, countries in MENA have experienced high rates of inflation, driven partly by currency depreciations and abnormal turbulence in their terms of trade. This section examines how macroeconomic shocks reduce real wages and/or increase rates of informality and unemployment.¹⁷

Labor markets in MENA faced long-standing structural challenges even before the COVID-19 shock. Compared with other emerging market and developing economies (EMDEs), MENA exhibits lower rates of labor force participation (47 percent versus 61 percent) and higher rates of unemployment (13 percent versus 8 percent).¹⁸ MENA is also the region with the lowest female labor force participation in the world.¹⁹ Job displacement can affect the employment prospects, earnings potential, and career trajectories of the unemployed, generating what is known as “scarring” (Ruhm 1991; Jacobson, LaLonde, and Sullivan 1993; Pissarides 1992; Kroft, Lange and Notowidigdo 2013; Filomena 2021; Arias and Lederman 2023). Identifying which margins of labor market adjustments need to become more flexible in the MENA region in order to prevent long-term scarring of previously employed workers in the region is key.

This section exploits comparable annual data on more than 70 countries spanning the period 1990–2021.²⁰ The analysis decomposes the time series for different labor market indicators for each country into a trend component and a cyclical component (deviations from the trend) in order to identify how the different cyclical components vary with the cyclical component of real GDP (that is to positive or negative economic shocks), without correcting for the specificities of the different economic shocks.²¹

17 The IMF’s Regional Economic Outlook for the Middle East and Central Asia (ME&CA) for October 2021 (IMF 2021) estimated the sensitivity of unemployment to changes in real output for the ME&CA region following a methodology very similar to the one employed in this section. The results in that report are qualitatively similar to the findings in this section, with a higher sensitivity of unemployment to changes in output in the ME&CA region compared to other emerging markets. There are, however, important differences between the two sets of empirical analysis, in addition to the differences in the country coverage between the World Bank’s MENA region and the IMF ME&CA region. The analysis in this section includes a broader set of labor market indicators besides unemployment (labor force participation, informality, public sector), including nominal and real wages (where available). In addition, the penalty in the Hodrick-Prescott filter is 100 in the IMF Regional Economic Outlook, whereas this report uses 6.5 for yearly data and 1,600 for quarterly data following Ravn and Uhlig (2002). Finally, while the benchmark in the IMF report are advanced economies, in this section the comparison of the MENA region is to other emerging market and developing economies.

18 Source: World Bank MNA Chief Economist Office staff calculations using data from ILO and the World Bank’s World Development Indicators. The labor force and unemployment rates correspond to totals (for both men and women). For each country, the annual time series for the unemployment rate and the labor force participation rate is separated into a cyclical component and a trend component using the Hodrick-Prescott filter with a penalty of 6.5 (Ravn and Uhlig 2022). The trend component of each indicator is then used as a dependent variable in a linear regression on year dummies, GDP per capita (in constant international USD), and a dummy for whether the region is MENA or EMDEs outside MENA. In the case of Egypt and Iran, the data corresponds to the second quarter of every year (in the case of quarterly data, the penalty for the Hodrick-Prescott filter is 1,600). The difference in the long-term averages reported for MENA and EMDEs corresponds to the coefficient on the dummy for the MENA region in the regression.

19 Source: World Bank World Development Indicators using national estimates from the ILO. The average rate of female labor force participation in 2021 (the latest year available) is about 19 percent. The second lowest average is in South Asia with about 28 percent.

20 The panel data is a compilation of indicators from ILO (national estimates). The data is not a balanced panel. That is, not all labor market indicators are available for every country in every year between 1990 and 2021. For MENA, the data includes Bahrain, Egypt, Iran, Jordan, Morocco, Oman, Saudi Arabia, Tunisia, the United Arab Emirates, and West Bank and Gaza.

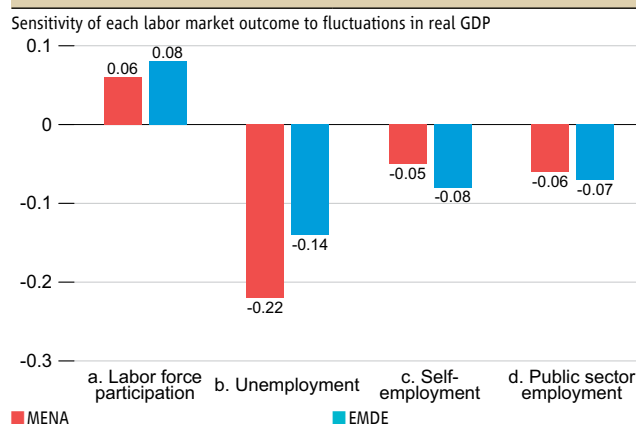
21 For each country, the annual time series for each indicator (including real GDP) is separated into a cyclical component and a trend component using the Hodrick-Prescott filter with a penalty of 6.5 (Ravn and Uhlig 2022). In the case of Egypt and Iran, the data corresponds to the second quarter of every year (in the case of quarterly data, the penalty for the Hodrick-Prescott filter is 1,600). See the notes in Figure 3.1 for additional details.

The preponderance of the evidence presented below indicates that labor force participation in MENA is procyclical and unemployment and self-employment are countercyclical, as in other EMDEs. During downturns (when real GDP is below its long-term trend), labor force participation declines and unemployment and informality (proxied by the rate of self-employment) increase.²² During expansions (when real GDP is above its long-term trend), labor force participation tends to increase and unemployment and informality to decrease.

Figure 3.1 shows the correlation between the detrended annual series of real GDP and the detrended annual series of the rates of labor force participation, unemployment, and informality, for MENA and EMDEs. In both MENA and EMDEs, the relation between the cyclical component of real GDP and the cyclical component of the rate of labor force participation is positive while the relation to the cyclical components of unemployment and informality is negative. The figure also shows the correlation between the cyclical components of real GDP and the rate of public sector employment, a potential policy response lever to macroeconomic shocks. The evidence suggests that public sector employment is countercyclical in both MENA and EMDEs.

Importantly, unemployment is much more sensitive to the business cycle in MENA than in other EMDEs, especially during downturns. In general, a 1 percent cyclical deviation in real GDP from its long-term trend (whether positive or negative) is associated with cyclical deviations in unemployment rates of 0.22 percentage point in MENA but only 0.14 percentage point in EMDEs (figure 3.1, panel b). This difference is driven by the way unemployment in MENA adjusts to negative shocks. During expansions, the responsiveness of unemployment in MENA is not markedly different from the response in EMDEs (-0.12 versus -0.14). In contrast, during contractions, when real GDP is below trend, the increase in the unemployment rate in MENA is 0.27 percentage point per shock to real GDP of 1 percent, but only 0.16 percentage point in EMDEs (almost half). These estimates suggest that the number of potentially scarred workers in the region from unemployment spells because of the macroeconomic shocks of 2020–22 would total 5.11 million.²³ If MENA exhibited the same responsiveness of unemployment to negative shocks as other EMDEs, the cumulative effect during 2020–22 would have been 2.08 million fewer unemployed workers.

Figure 3.1 Response of labor markets to fluctuations in real GDP in the Middle East and North Africa and in emerging market and developing economies



Source: Authors' calculations using data from ILO, World Bank's World Development Indicators, Haver Analytics, and the OECD.

Note: This figure shows results from linear regressions of the cyclical component of the annual time series of each indicator to the cyclical component of real GDP (in local currency units), separately for MENA and EMDEs. The labor market indicators correspond to totals (for both men and women). For each country, the annual time series for each labor market indicator and the annual time series for real GDP is separated into a cyclical component and a trend component using the Hodrick-Prescott filter with a penalty of 6.5 (Ravn and Uhlig 2022). The cyclical component of each indicator is regressed on the cyclical component of GDP and dummies for country, separately for MENA and EMDEs. In the case of Egypt and Iran, the data (including real GDP) corresponds to the second quarter of every year to correct for differences in the reporting of GDP in fiscal years instead of calendar years (in the case of quarterly data, the penalty for the Hodrick-Prescott filter is 1,600). The full set of regression results is available upon request.

²² Self-employment includes workers on family firms. This indicator is available for a larger number of countries in the MENA region in the ILO dataset compared to other indicators of informality.

²³ To obtain the sensitivity of each labor market indicator in expansions or contractions, the cyclical component of each indicator is regressed on the cyclical component of GDP, dummies for country, and a dummy for whether the deviation from the trend is positive or negative, separately for MENA and EMDEs. The full set of these regression results is available upon request. The estimate for the potential number of displaced workers is obtained by first estimating the trend and the cyclical components of total real GDP for the region (obtained from the World Bank's World Development Indicators). The 2020, 2021, and 2022 shocks amount to deviations from the trend of 7.3 percent, 5.3 percent, and 1.5 percent, respectively. These output gaps amount to projected increases in the unemployment rate of 2 percentage points in 2020, 1.4 percentage points in 2021, and 0.4 percentage points in 2022 if the responsiveness of unemployment to shocks is -0.27 (the estimate for MENA). In turn, these increases in the rate of unemployment amount to 2.65 million workers in 2020, 1.92 million workers in 2021, and 0.54 million workers in 2022, using 134 million as the size of the MENA labor force (2019; World Bank's World Development Indicators). The potential number of displaced workers from the shocks in 2020–22 would then total 5.11 million under the conservative assumption that unemployed workers in one year return to work the year after. If MENA exhibited the same responsiveness to shocks as other EMDEs (-0.16), the number of displaced workers would total 3.03 million. This exercise excludes Djibouti, Lebanon, Syria, and Yemen.

The sensitivity of other employment margins, including the responsiveness of public sector employment, is comparable in MENA and other EMDEs. In cyclical contractions, however, increases in public sector employment from its long-term trend are larger in MENA (-0.14) than in EMDEs (-0.08). Despite the expansion in public sector employment during contractions, unemployment tends to be more responsive to contractions in MENA than the average for EMDEs.

Consistent with the tradeoff between wage and unemployment adjustment, real wages are stickier in MENA than in other EMDEs. Among EMDEs, positive shocks to GDP are associated with deviations in hourly wages (both nominal and real) above trend (table 3.1); in contractions, real wages tend to remain above the long-term average, pointing to potential downward rigidities. In MENA, the correlation between the cyclical component of hourly wages and the cyclical component of GDP is negative in both contractions and expansions. Moreover, in contractions, the deviation of hourly (nominal and real) wages from the long-term average is much larger than in EMDEs. These results are based on data for only four MENA economies (Egypt, Jordan, Saudi Arabia, and the West Bank and Gaza), because comparable data on hourly wages are not readily available for the region. Micro-data from the Labor Force Survey in Egypt show that the countercyclicality of hourly wages is robust to considering private sector workers only, but this finding might be explained by countercyclical movements in public sector wages over the business cycle if they are leveraged as a policy tool.

Table 3.1 Response of nominal and real hourly wages to fluctuations in real GDP in the Middle East and North Africa and in emerging market and developing economies				
Country grouping	Nominal hourly wages		Real hourly wages	
	Real GDP below trend	Real GDP above trend	Real GDP below trend	Real GDP above trend
Middle East and North Africa	-1.22	-0.31	-1.27	-0.72
Emerging market and developing economies	-0.42	0.47	-0.63	0.26

Source: Authors' calculations using data from ILO, World Bank's World Development Indicators, Haver Analytics, and the OECD. Nominal and real wages for MENA are only available for Egypt, Jordan, Saudi Arabia, and the West Bank and Gaza.

Note: This figure shows results from linear regressions of the cyclical component of the annual time series of each indicator to the cyclical component of real GDP (in local currency units), separately for MENA and EMDEs. The labor market indicators correspond to totals (for both men and women). For each country, the annual time series for each labor market indicator and the annual time series for real GDP is separated into a cyclical component and a trend component using the Hodrick-Prescott filter with a penalty of 6.5 (Ravn and Uhlig 2022). The cyclical component of each indicator is regressed on the cyclical component of GDP, dummies for country, and dummies for whether the deviation of real GDP from the trend is positive or negative, separately for MENA and EMDEs. In the case of Egypt, the data (including real GDP) corresponds to the second quarter of every year to correct for differences in the reporting of GDP in fiscal years instead of calendar years (in the case of quarterly data, the penalty for the Hodrick-Prescott filter is 1,600). The full set of regression results is available upon request.

Chapters 4, 5, and 6 examine the trade-offs in labor market adjustments. Each chapter focuses on a specific shock: the COVID-19 pandemic, large currency devaluations, and negative terms of trade shocks.

CHAPTER 4 HOW DID THE LABOR MARKET ADJUST AFTER THE COVID-19 SHOCK?

Chapter 4 takeaways:

- During the COVID-19 pandemic, labor markets in MENA adjusted primarily through quantities, resulting in employment losses and a reduction in working hours in countries with low inflation.
- Labor market adjustments in MENA following the COVID-19 shock are consistent with those observed in other developing and emerging economies.

The COVID-19 pandemic affected both the demand for and the supply of workers. It had a negative effect on labor supply, as some workers were unable or unwilling to work. Lockdowns made it difficult for workers to commute to their workplaces. The closure of schools and childcare centers also reduced the labor supply, in particular for women (Albanesi and Kim 2021; Alon and others 2020).

Demand for labor also fell, as businesses were forced to close or reduce operations. Based on evidence from 17 countries in Latin America and the Caribbean, Botta, Hoffmann, and Vera-Cossio (2020) report a 45 percent job loss rate among respondents to an online survey and a 59 percent business closure rate among households owning small businesses. Using data from the COVID-19 MENA Monitor Surveys, which are based on high-frequency phone surveys, Krafft, Assaad, and Marouani (2021) document job losses among private sector wage workers of 10 percent in Morocco and 16 percent in Tunisia between February and October 2020.

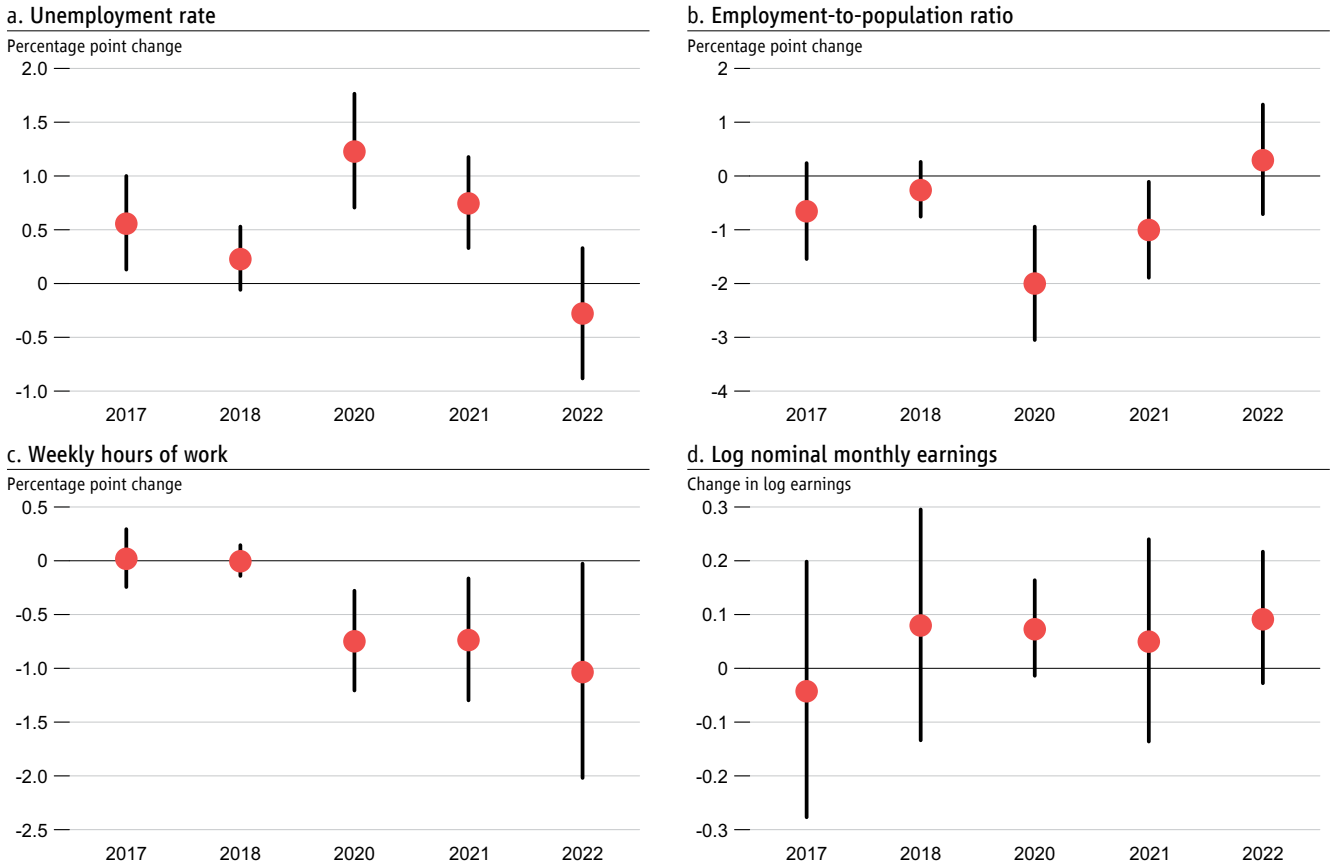
The labor market effects of the pandemic varied markedly across sectors. Public-facing industries such as hospitality, tourism, and retail were more severely affected than other industries (Adams-Prassl and others 2020; Cajner and others 2020). In MENA, the accommodation and food services industry was the hardest hit (Krafft, Assaad, and Marouani 2022).

4.1 Adjustment through changes in employment levels

Labor markets in EMDEs responded to the COVID-19 shock through changes in labor market quantities. The estimates presented in figure 4.1 reflect fixed-effects regressions of a global sample of EMDEs between 2017 and 2022 based on estimates by the International Labor Organization (ILO). Unemployment increased by 1 percentage point in 2020, relative to 2019, and employment declined by 2 percentage points. These findings underscore the stickiness of nominal wages following the onset of the COVID-19 shock.

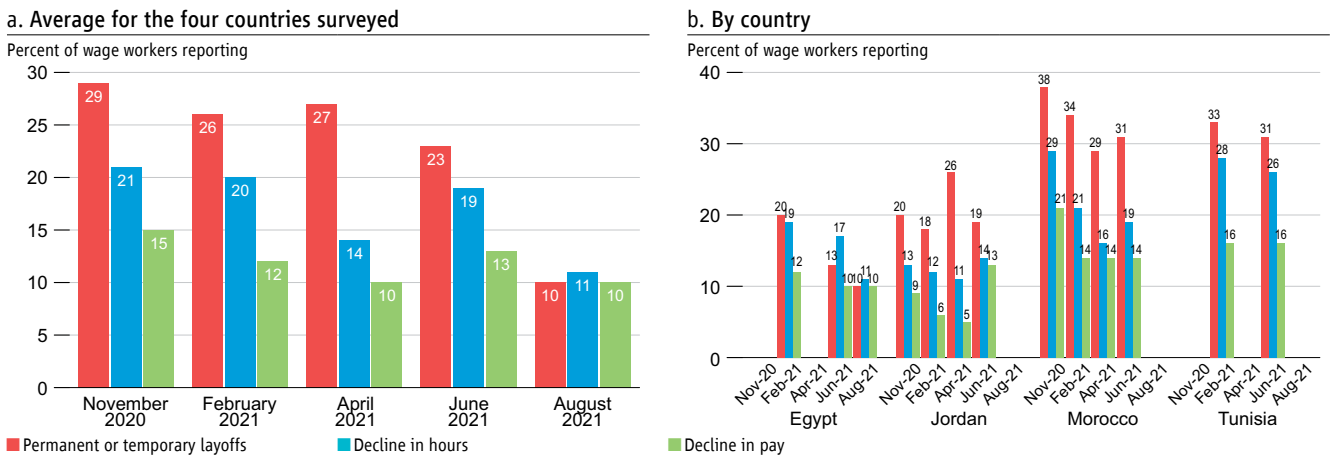
Data from the COVID-19 MENA Monitor Surveys conducted by the Economic Research Forum show that labor markets in Egypt, Jordan, Morocco, and Tunisia adjusted primarily through changes in quantities. The shares of wage workers reporting permanent or temporary layoffs or a decrease in working hours were larger than the share of workers reporting declines in wages. In both countries surveyed in November 2020 (Morocco and Tunisia), 29 percent of wage workers reported being permanently or temporarily laid off, 21 percent reported a decline in hours, and 15 percent reported a decline in wages. These patterns were also evident in the recovery period.

Figure 4.1 Results of fixed-effects regressions of labor market outcomes in a global sample of emerging market and developing economies, 2017–22



Source: Based on data from national estimates by the International Labor Organization.
 Note: Figure shows results from a fixed-effects model and reports annual estimates relative to 2019 (the base year). Standard errors are clustered at the country level. Earnings are in local currency units (LCU). The largest sample (unemployment) includes 125 economies. Dots show coefficients on period dummies; whiskers show 95 percent confidence intervals.

Figure 4.2 Layoffs and reduction in working hours or pay following the onset of the COVID-19 pandemic (November 2020–August 2021) in selected countries in the Middle East and North Africa

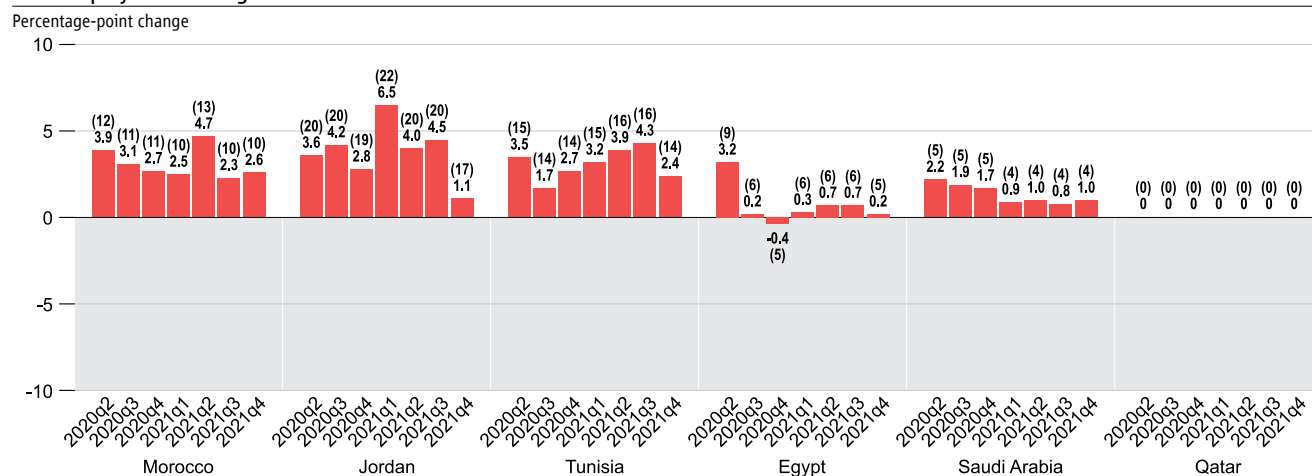


Source: COVID-19 MENA Monitor Surveys.
 Note: Analysis is restricted to working-age individuals (15–64). Wave 1 was conducted in November 2020 in Morocco and Tunisia and in Egypt in June 2020. Data on Egypt are excluded from the analysis because of the differences in timing and the absence of information on permanent or temporary layoffs. Wave 2 was conducted in February 2021 in Egypt, Jordan, Morocco, and Tunisia. Wave 3 was conducted in April 2021 in Morocco and Tunisia. Wave 4 was conducted in June 2021 in Egypt, Jordan, Morocco, and Tunisia. Wave 5 was conducted in August 2021 in Jordan. Figures are weighted.

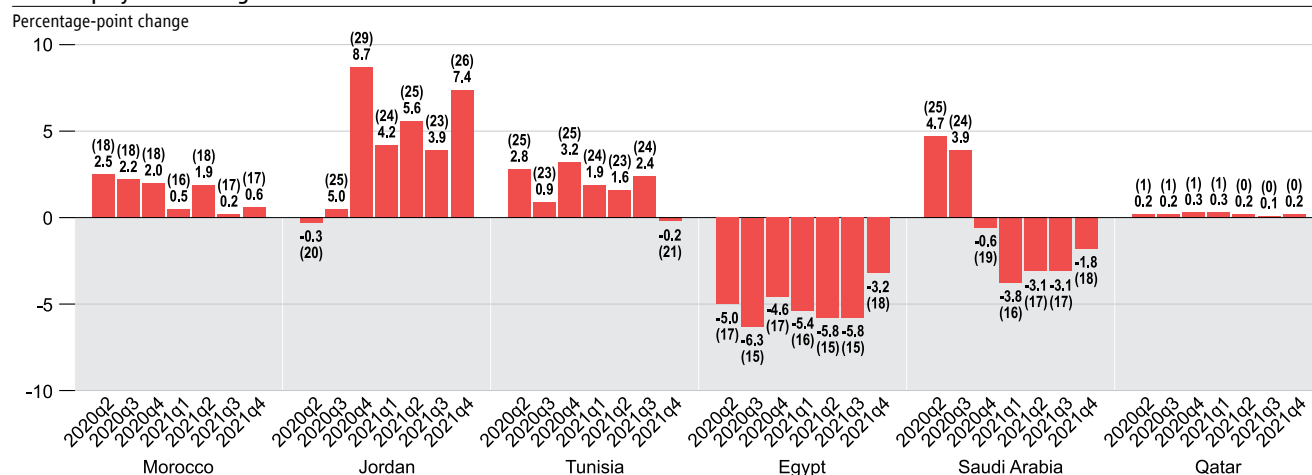
Among the various margins of quantity adjustment, changes in unemployment were critical in MENA (figure 4.3). To compute the increase in unemployment rates, the analysis compares the observed unemployment during and after the pandemic with the projected unemployment that would have been observed in the absence of the pandemic, following a methodology similar to that of Schady and others (2023) (box 4.1). The analysis focuses on Egypt, Jordan, Morocco, Qatar, Saudi Arabia, and Tunisia, countries for which quarterly data on unemployment rates for men and women are readily available. High-frequency labor market indicators allow momentous changes in labor market outcomes from the COVID-19 crisis to be captured.

Figure 4.3 Percentage-point change in unemployment among men and women that can be attributed to the COVID-19 shock in selected countries in the Middle East and North Africa, 2020Q2–2021Q4

a. Unemployment among men



b. Unemployment among women



Source: Egypt: National estimates by the International Labor Organization. Jordan: Labor Force Survey microdata. Morocco: Haut Commissariat au Plan (HCP). Qatar: Planning and Statistics Authority (PSA). Saudi Arabia: General Authority for Statistics (GASTAT). Tunisia: Institut National de la Statistique (INS).

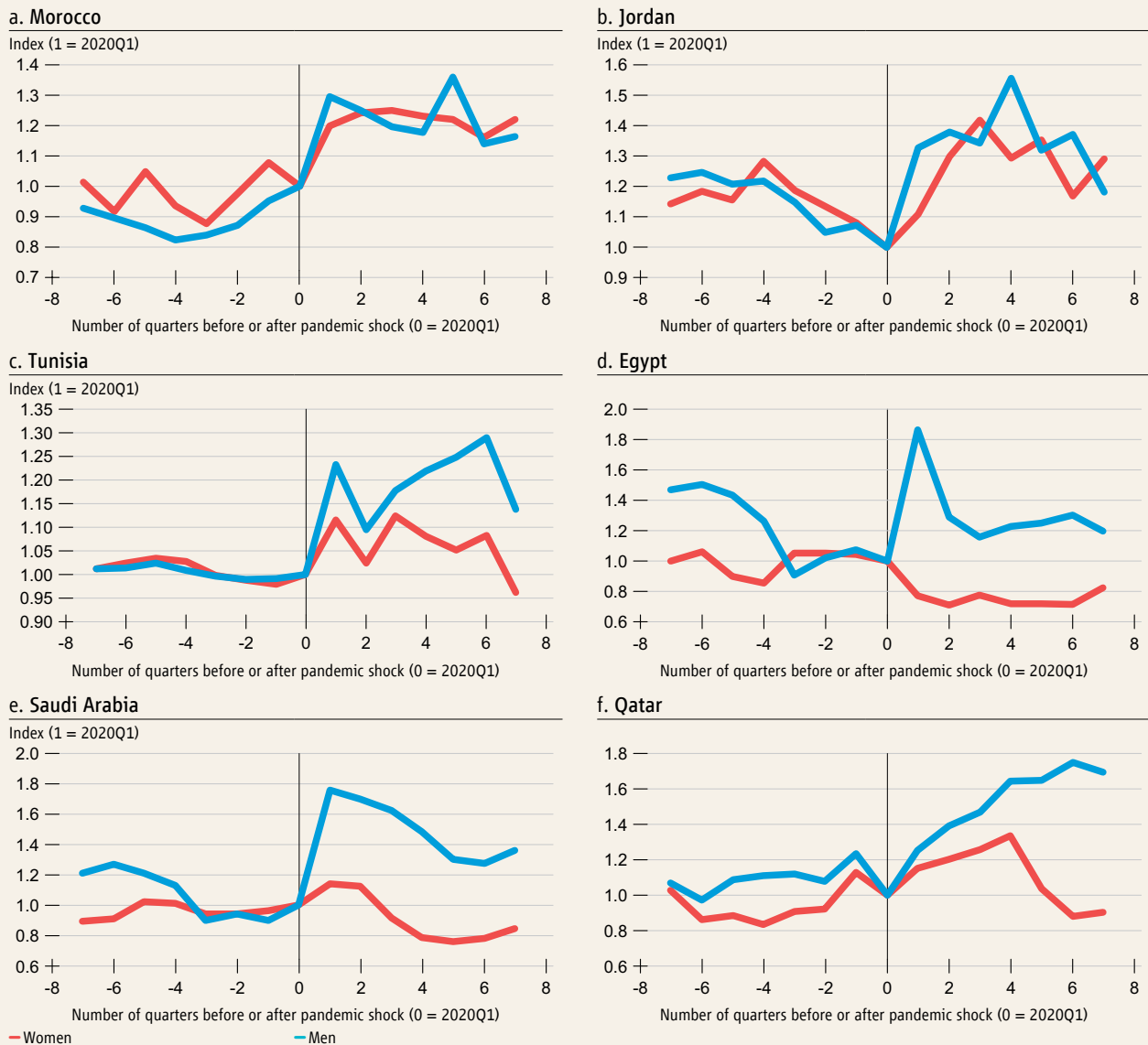
Note: Figure reports the percentage-point change in unemployment that can be attributed to the COVID-19 shock. Actual unemployment rates are in parentheses.

In Egypt, in the first quarter after the onset of the pandemic, unemployment among men increased by 3.2 percentage points before quickly recovering. In contrast, unemployment among women declined, as women dropped out of the labor force. The largest effect on male unemployment was in Jordan, where the rate rose by 3.6 percentage points in 2020Q2 and 6.5 percentage points in 2021Q1. The effect on women's unemployment was also very large, with an estimated increase of 5 percentage points in the third quarter of 2020 and 9 percentage points in the fourth quarter. In both Morocco and Tunisia, the pandemic effects on unemployment were larger for men. In the second quarter of 2020, for example, unemployment in Morocco rose by 4 percentage points for men and just 2.5 percentage points for women

Box 4.1 Methodology used to estimate changes in unemployment that can be attributed to the pandemic

The methodology used to calculate the impact of the pandemic on unemployment in figure 4.3 is similar to the one employed in Schady and others (2023) to compute the effect of the pandemic on employment and attendance in pre-school and school. The estimation process involves three steps. First, a regression analysis is conducted using pre-pandemic data, typically available quarterly beginning in the first quarter of 2012. Data points before 2012 are excluded here in order to make sure that the results are not driven by momentous changes in the labor market in the aftermath of the Arab Spring in MENA countries. Based on this regression, time trends and seasonal effects on unemployment are estimated. Second, the coefficients derived from this regression are used to predict expected unemployment for each quarter in 2020 and 2021. Third, the observed unemployment is subtracted from the predicted unemployment. Before the COVID-19 shock, unemployment rates followed the same trends. Differences during and after the pandemic can thus be attributed to the pandemic.

Figure B4.1.1 Male and female unemployment rates in six countries in the Middle East and North Africa, 2018–22



Source: Egypt: National estimates from the International Labor Organization. Jordan: Labor Force Survey microdata. Morocco: Haut Commissariat au Plan (HCP). Qatar: Planning and Statistics Authority (PSA). Saudi Arabia: General Authority for Statistics (GASTAT). Tunisia: Institut National de la Statistique (INS). Note: All series are seasonally adjusted.

(estimates for Tunisia were roughly similar). Qatar and Saudi Arabia witnessed the smallest changes in unemployment (the unemployment rate in Qatar was less than 1 percent before the pandemic). Unemployment rates are estimated to have declined among women in Saudi Arabia between 2020Q4 to 2021Q4, in line with the sharp increase in female labor force participation and employment rates in recent years (Tamayo, Koettl, and Rivera 2021).

The unemployment rate among youth (15–24) in MENA is the highest in the world, estimated at around 26 percent in 2019. It has been persistently high for the past two decades (Islam, Moosa, and Saliola 2022; Gatti and others 2013). This segment of the population appears to have been particularly hard hit by the pandemic (see figure A.1 in appendix A). Evidence from 12 low- and middle-income countries—including two MENA countries, Jordan and Morocco—points to large employment losses among youth (Schady and others 2023). Given the large youth population in MENA, employment losses among young people in the region are particularly worrisome, as they can result in long-lasting scarring effects on their working lives, impeding both individual prospects and overall economic development.

Non-nationals in Jordan and Saudi Arabia seem to have fared worse than the national citizens (see figure A.2 in appendix A). In Jordan in 2020Q2, the unemployment rate increased by 2.8 percentage points among non-nationals and by 2.2 percentage points among nationals. In 2020Q3, the unemployment rate is estimated to have increased by 6 percentage points among non-nationals and 2 percentage points among nationals. Although unemployment among Saudis seems to have recovered by 2020Q4, unemployment among migrants, who constitute three quarter of the employed population in Saudi Arabia,²⁴ remained consistently higher in 2020 and 2021.

4.2 Changes in employment levels versus changes in hours of work

The dearth of accessible high-frequency microeconomic data²⁵ in the MENA region is a serious limitation to the necessary economic analysis to disentangle whether the labor market adjusts via employment levels or hours worked. Data for West Bank and Gaza are a glaring exception. Using quarterly Labor Force Surveys on the West Bank and Gaza, Deng and others (2023) examine how hours of work and employment levels responded to the COVID-19 shock. The West Bank and Gaza is one of the few economies in MENA for which high-frequency panel data from before and after the COVID-19 shock, including information on hours worked, are publicly available.²⁶

In the West Bank and Gaza, labor markets adjusted through changes in both the extensive (number of employees) and intensive (hours worked) margins of employment (figure 4.4). In the first quarter following the onset of the pandemic (2020Q2), there was a large increase in the probability of exiting the labor force for both men and women. Among men, the pandemic increased the probability of dropping out of the labor force by 8 percentage points in the West Bank and 7 percentage points in Gaza. In the West Bank, the decline seems to have coincided with both a decline in employment (6 percentage points) and a decline in unemployment (2 percentage points). In 2020Q3, male unemployment increased by 3 percentage points. Among women, the decline in labor force participation seems to have been most prominent in Gaza, where female unemployment declined by roughly 5 percentage points, possibly indicating a discouraged worker effect.²⁷

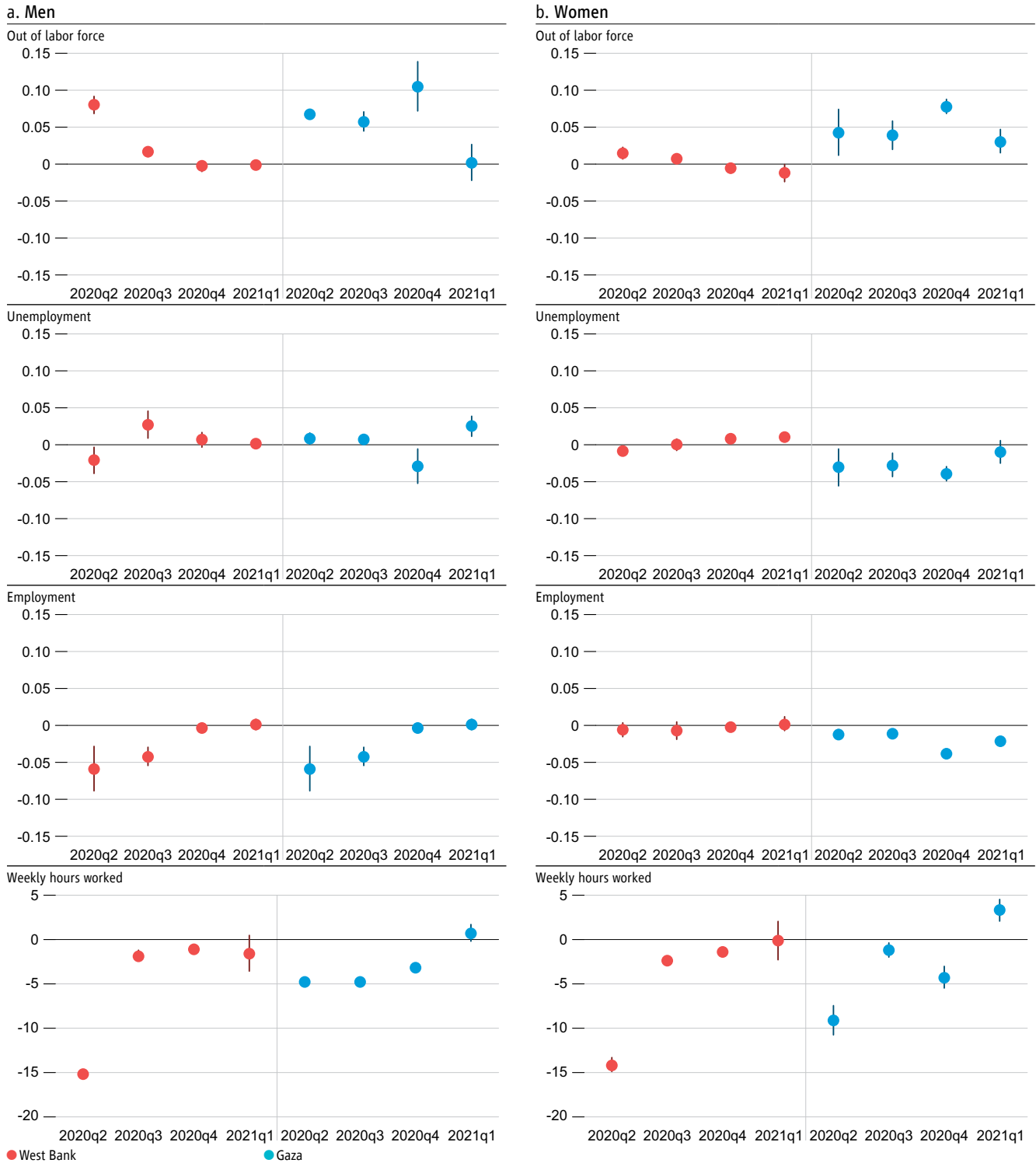
24 This is according to administrative data from the General Organization of Social Insurance (GOSI) in Saudi Arabia in 2023Q1. In 2021, Saudis also constituted only a quarter of the employed population according to the General Authority for Statistics (GaStat).

25 See Belhaj and others (2022).

26 Several features set the West Bank and Gaza apart from other economies in the region. Chief among them are their unique economic and political circumstances. The labor market is also divided into two segments. The West Bank interacts closely with Israel, whereas Gaza remains under continuous economic isolation and constriction.

27 This evidence is in line with Rodriguez and others (2023) on the labor market impact of the COVID-19 shock in Egypt. Using labor force surveys, the authors show that the COVID-19 shock led to a temporary drop in employment among both women and men. Displaced men were more likely to become unemployed, while displaced women were more likely to drop out of the labor force.

Figure 4.4 Percentage-point change in labor market outcomes among men and women in the West Bank and Gaza following the onset of the COVID-19 pandemic



Source: Deng and others 2023 (based on Labor Force Surveys in the West Bank and Gaza).
 Note: Dots show coefficients on period dummies; whiskers show 95 percent confidence intervals. Out of the labor force, unemployment, and employment are defined as 1 if the individual is in the state and 0 if the individual is in any other state. These coefficients are interpreted as changes in percentage points of each labor market state as a share of the total sample. Hours worked refer to total hours worked the previous week. The sample for this outcome is restricted to the employed. The estimation sample is restricted to men and women 20–59. The control group is all observations between 2018Q1 and 2020Q1. The zero line refers to estimated effects that are not quantitatively significant. The regression controls for seasonality fixed effects and basic demographic characteristics, such as age and marital status.

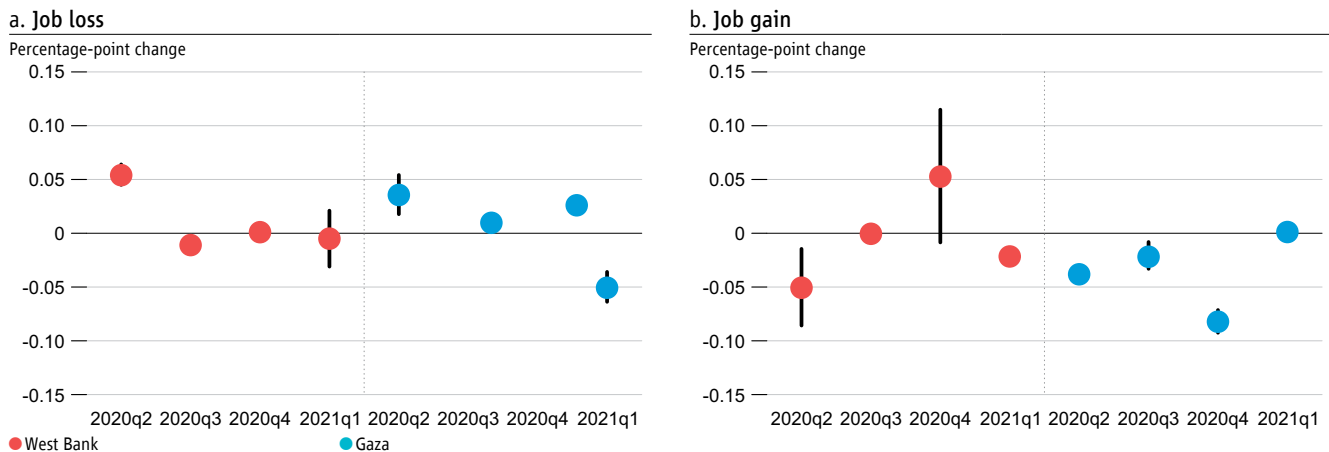
Adjustments after the onset of the COVID-19 pandemic also took place through a reduction in weekly hours worked. On average, men worked 15 hours less per week in the immediate aftermath of the crisis (2020Q2) in the West Bank and 5 hours less per week in Gaza. This reduction in weekly working hours seems to have persisted until 2020Q4, although the largest declines were documented in the immediate aftermath of the shock. Among women, weekly hours worked declined by about 15 in the West Bank and 10 in Gaza.

4.3 Factors behind fluctuations in unemployment

Unemployment fluctuates as individuals transition into unemployment (job loss rates) and out of unemployment (job finding rates). During economic downturns, several factors affect these transitions, including a decrease in job creation (fewer new vacancies), an increase in job destruction (the elimination of existing positions), and a decline in job churning or reallocation, as fewer workers decide to voluntarily leave their jobs in search of better opportunities.

Several studies examine the contributions of these factors in explaining cyclical unemployment (unemployment caused by fluctuations in the business cycle). Shimer (2012) finds that the job finding rate accounted for three-quarters of the fluctuations in the unemployment rate in the United States and the job loss rate for only one-quarter. Instead, other papers provide evidence from the United States and OECD countries suggesting that cyclical unemployment is driven by increases in job separation rates rather than declines in job finding rates (Diamond 2013; Fujita and Moscarini 2017; Elsbj, Hobijn, and Şahin 2013).

Figure 4.5 Job loss and job gain among men in the West Bank and Gaza following the onset of the COVID-19 pandemic (2020Q2–2021Q1)



Source: Deng and others 2023.

Note: Dots show coefficients on period dummies; whiskers show 95 percent confidence intervals. In panel a, if an individual was employed in the previous period but no longer in the current one, his job loss status in the current period is 1. If the individual was employed in the previous period and is still employed in the current period, his job loss status is 0. If the individual was not employed in the previous period, his job loss status is undefined. In panel b, if an individual was not employed in the previous period but is employed in the current one, his job gain status in the current period is 1. If the individual was not employed in the previous period and is still not employed in the current one, his job gain status is 0. If the individual was employed in the previous period, his job gain status is undefined. The estimation sample is restricted to men 20–59. The control group is all job gain transitions between 2018Q2 and 2020Q1. The zero line refers to estimated effects that are not quantitatively significant. The regression controls for seasonality fixed effects, age, and marital status.

Deng and others (2023) examine changes in job separation and job finding rates among men in the West Bank and Gaza (figure 4.5).²⁸ They find that in the immediate aftermath of the pandemic (2020Q2), job loss rates among men increased by 5 percentage points in the West Bank and 4 percentage points in Gaza and that job finding rates declined by 5 and 4 percentage points, respectively. The recovery in the West Bank was faster than in Gaza. Job separation rates in Gaza

²⁸ This analysis is restricted to men because transitions for women were mainly into inactivity.

remained higher than before the pandemic until 2020Q4; the job finding rate in Gaza was still significantly lower (8 percentage points) in 2020Q4 than it was before the pandemic.

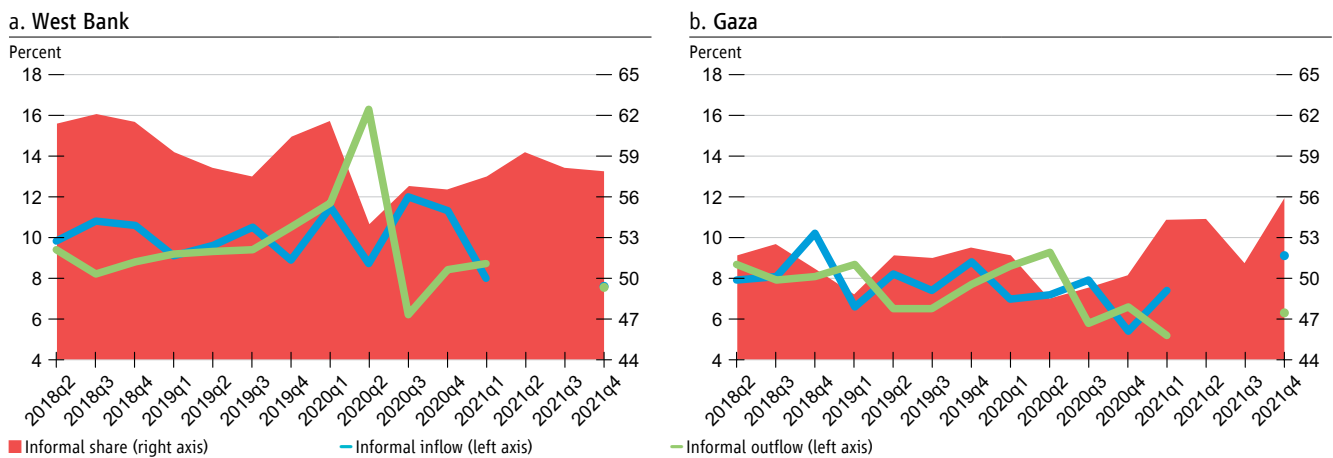
4.4 Effect of the pandemic on job losses among informal workers

The repercussions of the pandemic-induced job losses are not distributed equally across segments of the population. Hoogeveen and Lopez-Acevedo (2021) show that the pandemic imposed uneven burdens on various groups of workers in MENA region tied to job characteristics such as occupation and the nature of employment contracts. The evidence for MENA aligns with the global evidence on labor market dynamics during the pandemic.

The West Bank and Gaza were no different. Following the COVID-19 shock, employment losses among men in the West Bank and Gaza were much greater among informal workers, blue-collar workers, and workers with low levels of education (Deng and others 2023). Men in the informal sector were much more likely to lose their jobs than formal workers. In 2020Q2, relative to the pre-pandemic period, the likelihood of losing one's job was 7 percentage points higher among informal workers in the West Bank and 9 percentage points higher in Gaza. Formal workers in the West Bank were only 2 percentage points more likely to lose their jobs in 2020Q2, and formal workers in Gaza were 2 percentage points less likely to lose their jobs than they were before pandemic.

Labor market adjustment across the formal/informal sectors may lead to highly volatile flows into and out of informality. Informal employment in the region is estimated to have accounted for 77 percent of total employment in Yemen in 2014, 67 percent in Egypt in 2019 and in Iraq in 2021, 62 percent in Lebanon in 2022, 52 percent in Jordan in 2021, and 37 percent in Tunisia in 2019 (see tables B.1, B.2, and B.3 in appendix B for a summary of aggregate labor market indicators in the MENA region).²⁹

Figure 4.6 Informality in the West Bank and Gaza, 2018–21



Source: Data from Labor Force Survey in the West Bank and Gaza.

Note: The analysis is restricted to men 20–59. Inflows and outflows are defined in terms of all individuals with a labor market state (employed, unemployed, or out of the labor force). Individuals are defined as informal workers if they are self-employed or unpaid family workers. Employees are defined as informal workers if they have no work contract or have a verbal contract and no health insurance.

In the analysis in figure 4.6, informal workers are employees who do not have a work contract or who have a verbal contract but do not have health insurance. Informal workers also refer to those who are self-employed and to unpaid family workers. Flows out of informality increased substantially after the pandemic, particularly in the West Bank. Flows

²⁹ See Lopez-Acevedo and others (2023) for an analysis of informality in MENA and the effects of the institutional environment on informality, with a focus on Egypt, Morocco, and Tunisia. Gatti and others (2014) provide the first comprehensive analysis of the phenomenon and its likely determinants.

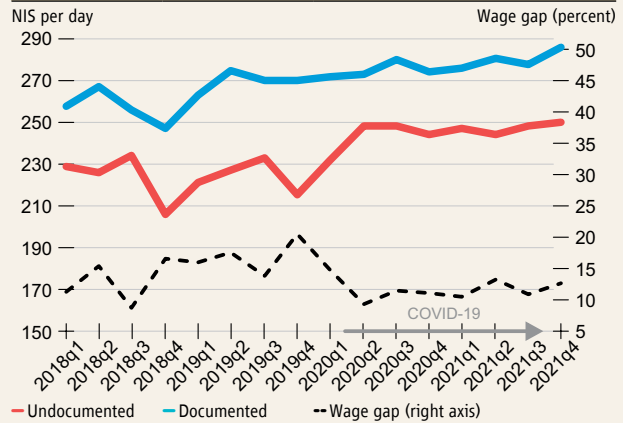
into informality then gradually increased, as individuals transitioned back into informality after experiencing job losses (figure 4.6).³⁰ Nonetheless, undocumented workers who commute to Israel and the settlements for work benefited from higher wages compared to documented commuters (box 4.2).

Box 4.2 How did the pandemic affect documented and undocumented workers from the West Bank who work in Israel and the settlements?

Wages of undocumented workers from the West Bank rose 11 percent after the outbreak of the pandemic in 2020Q2, while wages of documented workers barely increased (Adnan and Etkes forthcoming). As a result, the wage gap between documented and undocumented narrowed by 9 percentage points (figure B4.2.1).

The increase in undocumented workers’ wages can be explained partly by a shift from documented to undocumented employment among high-wage construction workers. Adnan and Etkes believe that the change reflected the preference of firms and workers to join the shadow economy after the onset of the pandemic in order to evade costly COVID-19-related regulations, which required workers who used to commute from the West Bank to stay in Israel for prolonged periods of time. The requirement imposed costs on both workers and their Israeli employers, who had to cover the costs of accommodation and the health insurance of workers from the West Bank. The transition from documented to undocumented employment was eased by Israel’s refocusing of actions by the police, border police, and labor law inspection units on enforcing COVID-19-related regulations within Israel.

Figure B4.2.1 Daily wages of and wage gap between documented and undocumented workers in the West Bank and Gaza, 2018–21



Source: Adnan and Etkes forthcoming.
 Note: Data are from Labor Force Surveys. Figure excludes Palestinian holders of Israeli identification cards, most of whom live in East Jerusalem.

³⁰ Studying flows in and out of informality in other countries in the region following the COVID-19 shock would provide insights. The absence or unavailability of publicly accessible high-frequency panel data prevented such analyses from being conducted.

CHAPTER 5 HOW DID THE LABOR MARKET ADJUST AFTER MAJOR CURRENCY DEVALUATIONS?

Chapter 5 takeaways:

- Following major currency devaluations, labor markets adjust through lower real wages.
- Labor market adjustments in MENA following large currency devaluations are consistent with adjustments observed in other developing and emerging economies.

Unlike the COVID-19 shock, which reduced demand for labor, major currency devaluations can increase or decrease labor demand. The direction of the labor response depends primarily on firms' reliance on imported inputs or exposure to foreign sales (Campa and Goldberg 2001; Nucci and Pozzolo 2010).

A major currency devaluation makes imported goods more expensive. The resulting decline in demand for these goods may lead firms to reduce their demand for labor in an effort to cut costs and maintain profitability. Nucci and Pozzolo (2010) show that the more a firm relies on imported goods, the larger the increase in its costs, the decline in marginal profitability, and the resulting decline in employment.

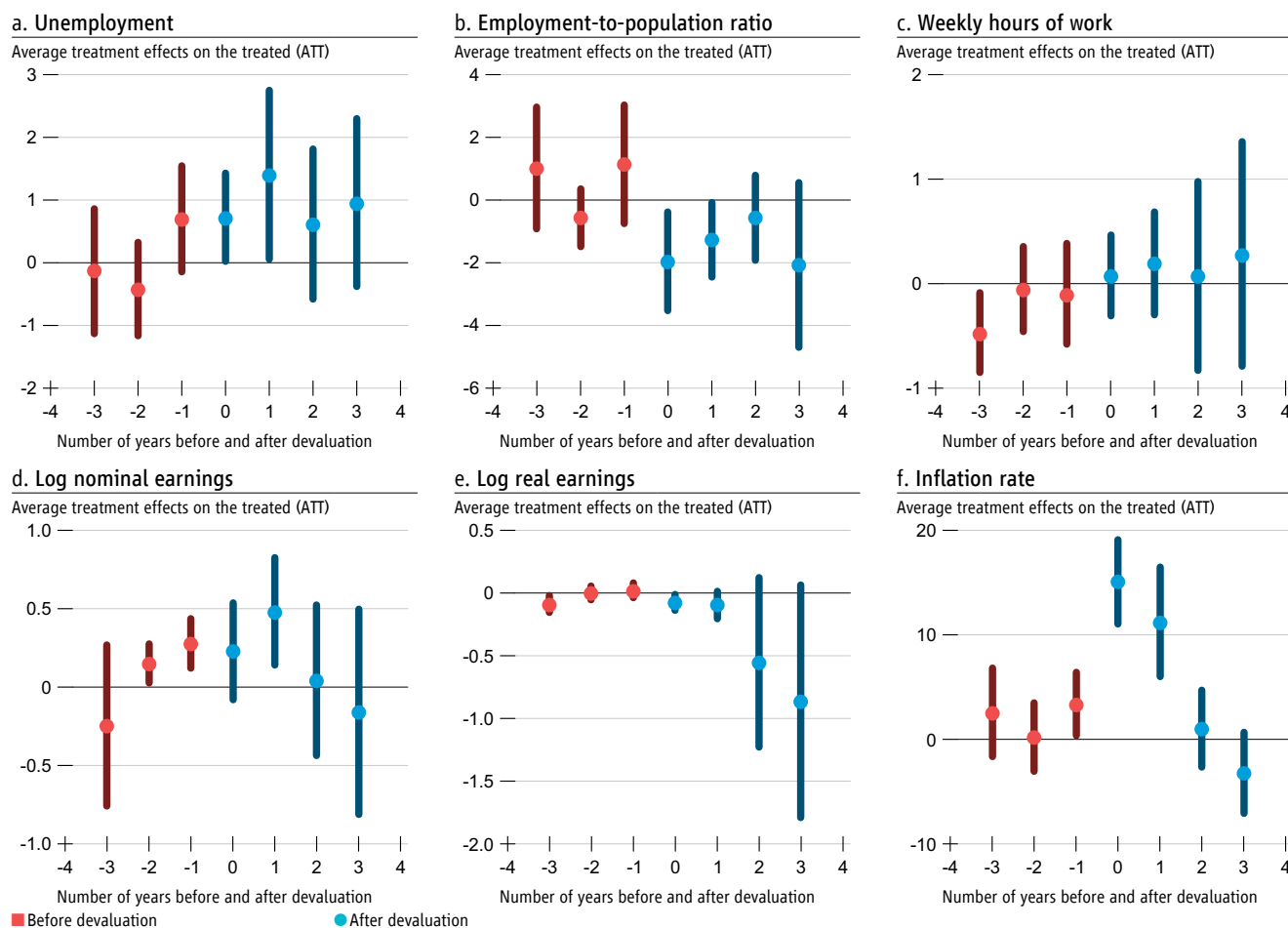
A currency devaluation can increase demand in export-oriented or import-competing industries, for several reasons. First, it makes exports more competitive in the global market. The larger the share of revenues from exports in total revenues, the larger the increase in sales and profitability in the aftermath of a currency devaluation and the larger the increase in labor input.

Second, a devaluation makes locally produced goods cheaper and more competitive than imported goods, potentially leading to an increase in demand for local products and services and the creation of new job opportunities in these industries. This effect depends largely on the degree of substitutability of imported and domestically produced goods.

5.1 Adjustment in emerging market and developing economies

Large currency devaluations are accompanied by rising inflation. High inflation may facilitate labor market adjustments through prices, as highlighted in chapter 3; labor market quantities (unemployment, employment, informal employment, and working hours) may be less sensitive to currency devaluation shocks.

Analysis examined adjustments following large currency devaluations in a sample of 148 EMDEs between 1970 and 2022 (figure 5.1), where a large devaluation is defined as more than 30 percent, the smallest of three largest devaluations in Egypt between 2000 and 2021. The estimates show a downward real wage adjustment associated. The decline in real wages is driven by a surge in inflation at the time of the shock, which persisted up to one year after the devaluation. The magnitude of the reduction in real wages suggests that adjustment through prices is more important than adjustment through quantities (unemployment and employment).

Figure 5.1 Labor market adjustments to large currency devaluations in developing and emerging economies, 1970–2022

Source: All data except inflation rates are from national estimates by the International Labor Organization. Inflation rates are from the International Financial Statistics of the International Monetary Fund.

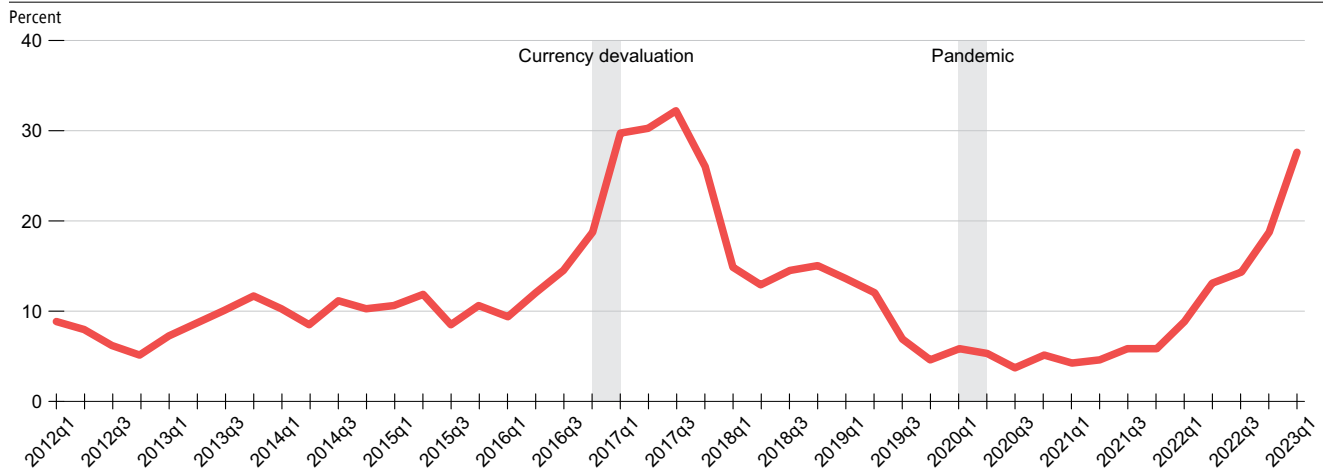
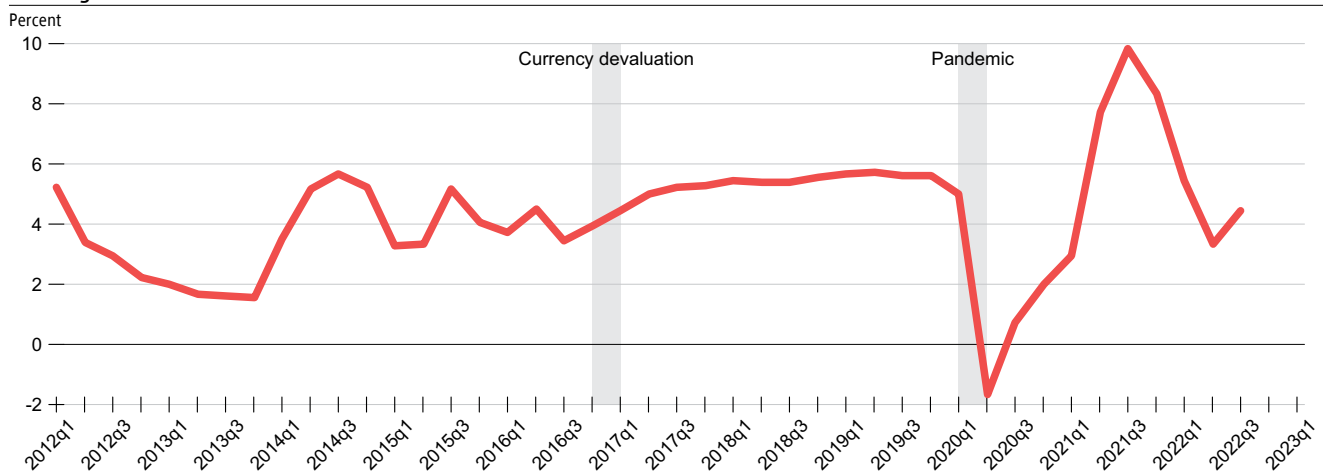
Note: The sample covers 148 emerging market and developing economies. If countries experienced more than one devaluation of at least 30 percent, the year of the largest shock was selected. Estimates were made using the methodology of Callaway and Sant'Anna (2021). Dots show estimated average treatment effects on the treated (ATT); whiskers show 90 percent confidence intervals. Earnings are in local currency units (LCU). Sample varies across variables because of data availability. The largest sample (unemployment) includes 55 countries in the treatment group. The number of countries in the control group was 93. The control group refers to countries that did not witness currency devaluations larger than 30 percent during the period under consideration.

5.2 Adjustment following the 2016 currency devaluation in Egypt

On November 3, 2016, the Central Bank of Egypt ended foreign exchange controls and Egypt's managed-float regime.³¹ The decision to float the currency was triggered by a shortage of foreign currency reserves and a growing current account deficit. Following the move, the Egyptian pound witnessed a steep depreciation. The year-on-year change in the nominal exchange rate (local currency units per US\$) stood at 87 percent in 2016Q4 and 122 percent in 2017Q1.

This large devaluation episode was associated with a rise in inflation and a decrease in purchasing power. In 2017, inflation in Egypt stood at 30 percent (figure 5.2).

31. This section focuses on Egypt because data on other MENA countries are limited.

Figure 5.2 Inflation and economic growth rates in Egypt, 2012–22**a. Inflation rate****b. GDP growth rate**

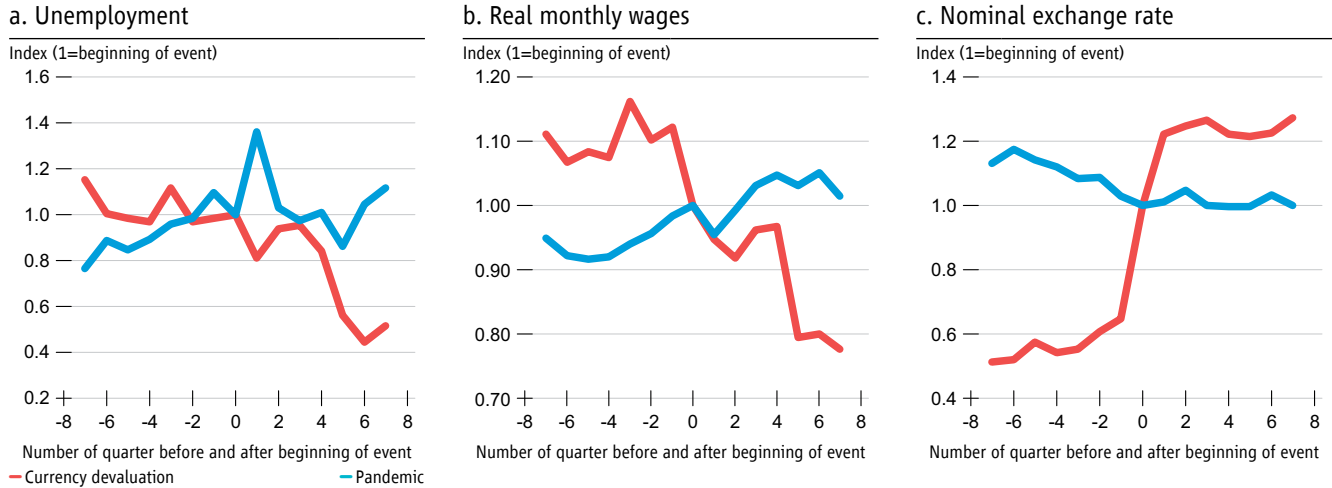
Source: Central Bank of Egypt.

Note: Egypt's fiscal year starts in July. For GDP growth, Q1 in Egypt's fiscal year corresponds to Q3 in the calendar year.

The pandemic was a recessionary shock; the 2016 currency devaluation was a nonrecessionary, inflationary shock. Different margins of adjustment during the 2016 currency devaluation and the pandemic in Egypt are consistent with the fact that labor market adjustment depends partly on the inflation context.

The high inflation associated with the devaluation led to the erosion of real wages and a decline in unemployment (figure 5.3). Over the six months following the devaluation, real wages gradually declined by 10 percent. This decline continued, reaching approximately 20 percent lower 15 months after the devaluation. The downward real wage adjustment during the 2016 devaluation affected both women and men, public sector and private sector workers. In contrast, during the pandemic, when Egypt's inflation rate was relatively low (5 percent in 2020), labor market adjustment occurred through higher unemployment rates; real wages remained relatively stable.

Figure 5.3 Unemployment and wages following Egypt’s 2016 currency devaluation and the COVID-19 pandemic



Source: Data on unemployment rates and monthly wages are from Labor Force Surveys. Data on the nominal exchange rate are from the Central Bank of Egypt.
 Note: All series are seasonally adjusted. The real wage indices (monthly and hourly) were obtained by dividing data points by corresponding quarterly Consumer Price Index (CPI) values. For the currency devaluation episode, all outcomes are indexed to 1 in 2016Q4 (the quarter of the currency devaluation). For the pandemic, all outcomes are indexed to 1 in 2020Q1 (the quarter preceding the recession).

CHAPTER 6 HOW DID THE LABOR MARKET ADJUST AFTER NEGATIVE TERMS OF TRADE SHOCKS?

Chapter 6 takeaways:

- Following negative terms of trade shocks, labor markets in developing and emerging economies adjusted through higher unemployment and a reduction in hours worked.
- Evidence from the Islamic Republic of Iran suggests that unemployment increased following the 2014/15 global decline in oil prices.

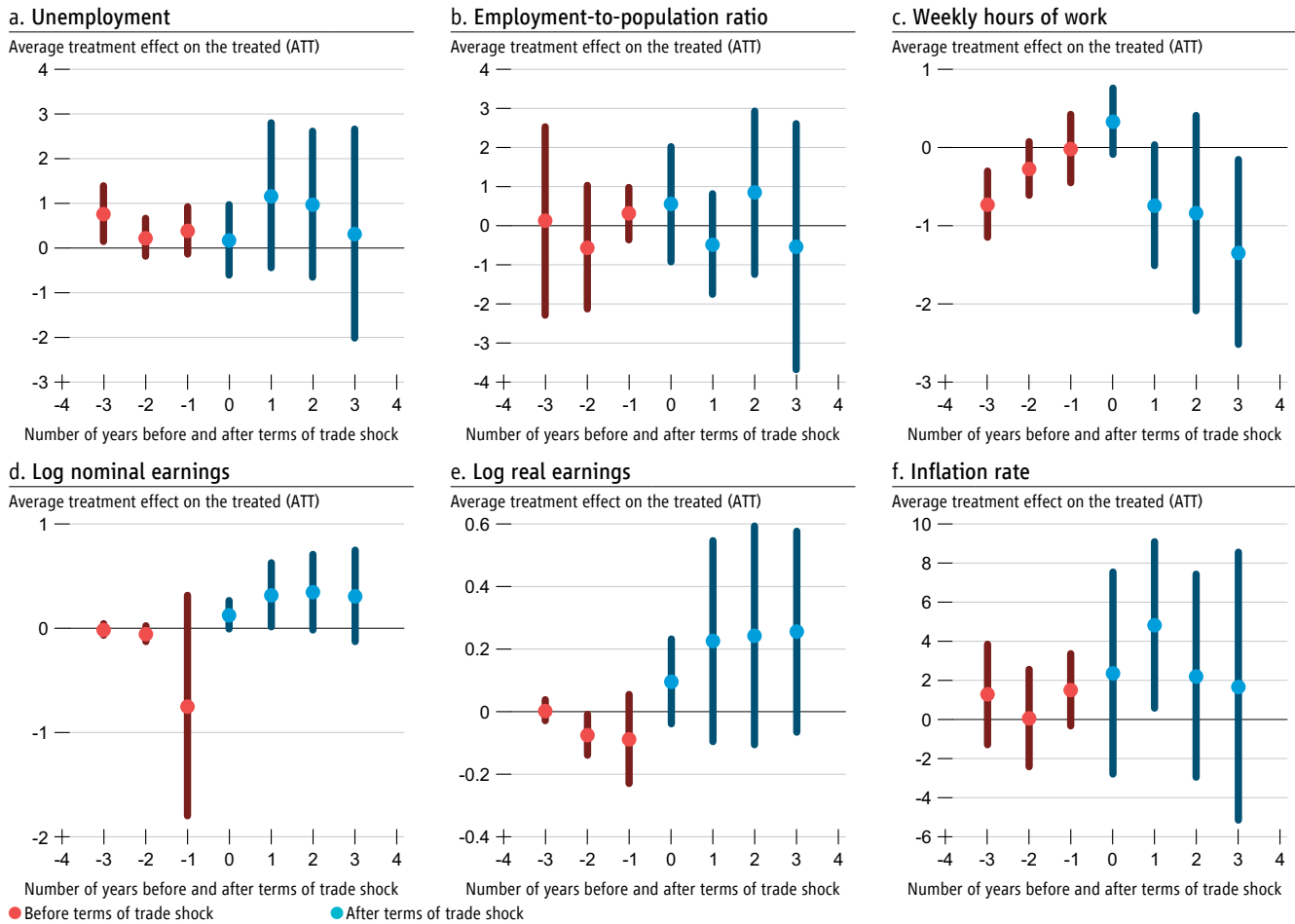
Terms of trade shocks can affect the demand for labor. A negative terms of trade shock makes imports more expensive relative to exports. Businesses facing reduced export revenues may reduce their workforce or cut back on hiring new employees; the higher prices of imported goods reduces real aggregate demand. The income effect from a negative terms of trade shock (a decline in aggregate disposable income) may reduce overall demand and put downward pressure on prices (Bems and others 2021), which can reduce employment opportunities and potentially raise unemployment rates. Negative terms of trade shocks can have adverse effects on labor demand, particularly but not only in exporting industries.

Unlike currency devaluations, which are typically inflationary, negative terms of trade shocks may or may not be associated with inflationary pressures. The direct effect of the change in international commodity prices on consumer prices may be positive or negative, depending on whether the country is a net importer or exporter of the commodity and on the income effect from a negative terms of trade shock (Bems and others 2021).

6.1 Adjustment in emerging market and developing economies

With a certain level of uncertainty, the event study estimates in figure 6.1 show that unemployment increases after large negative terms of trade shocks (figure 6.1, panel a) and weekly hours worked decline. The price adjustment channel does not appear to be at work, as real wages do not show any decline, highlighting the tradeoff between adjustments in quantities and adjustments in real wages.

Figure 6.1 Labor market adjustments to large negative terms of trade shocks in emerging market and developing economies between 1981 and 2020

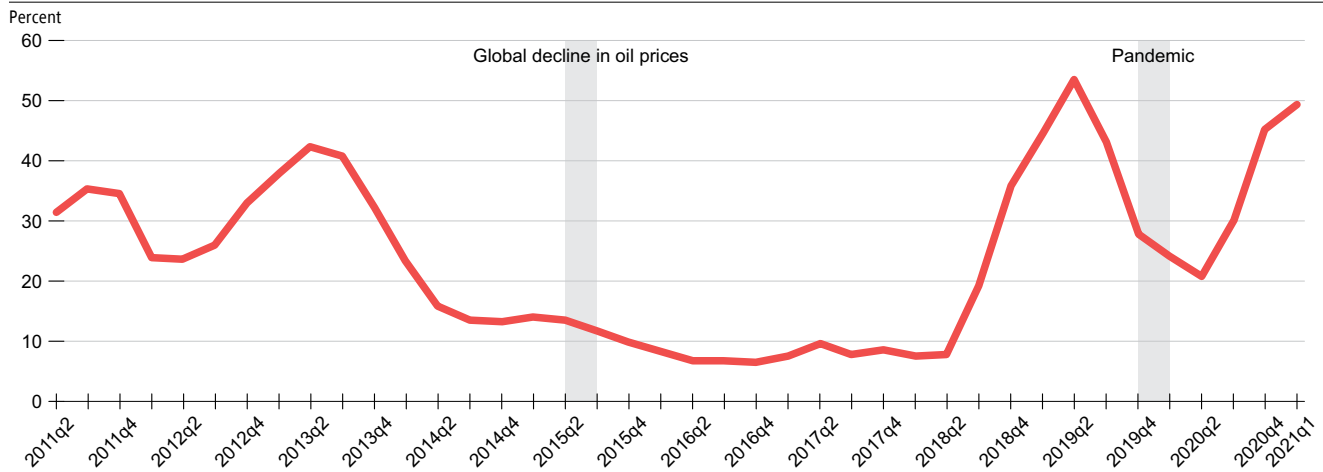
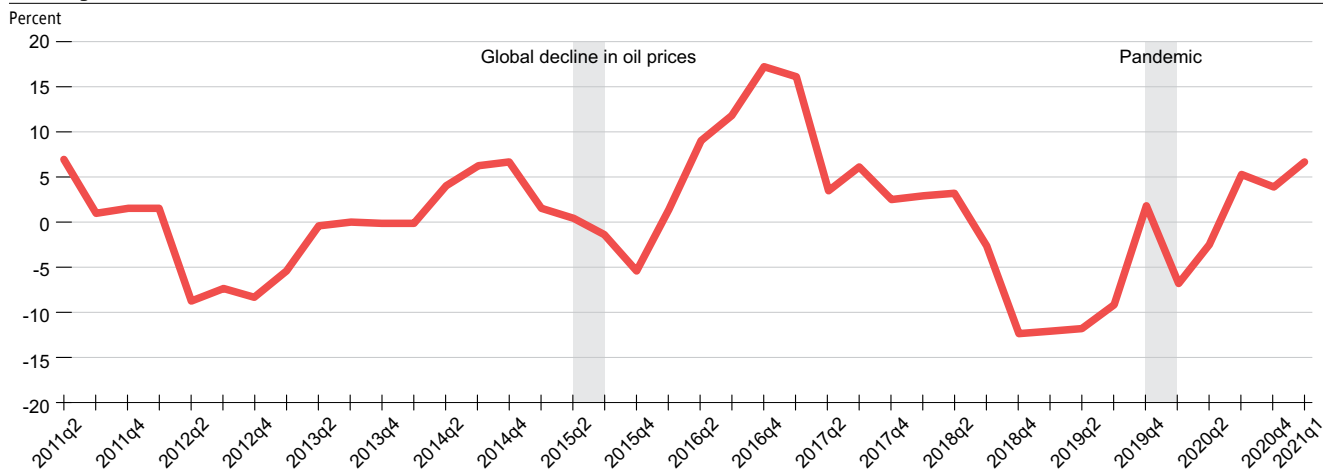


Source: All data except inflation rates are national estimates by the International Labor Organization. Inflation rates are from the International Financial Statistics of the International Monetary Fund.

Note: The sample includes 147 emerging and developing economies over the period 1981–2020 that experienced a negative terms of trade shock larger than -25 percent (the average of the largest negative terms of trade shocks in MENA countries in the sample). If countries witnessed more than one such shock, the year of the largest shock was selected. Estimates were obtained using the methodology of Callaway and Sant’Anna (2021). Dots show estimated average treatment effects on the treated (ATT); whiskers show 90 percent confidence intervals. Earnings are in local currency units (LCU). The sample varies by event because of data availability. In the largest sample (unemployment), the number of treated countries is 29 countries; the number of countries in the control group is 118.

6.2 Adjustment following the 2014–15 oil price shock in the Islamic Republic of Iran

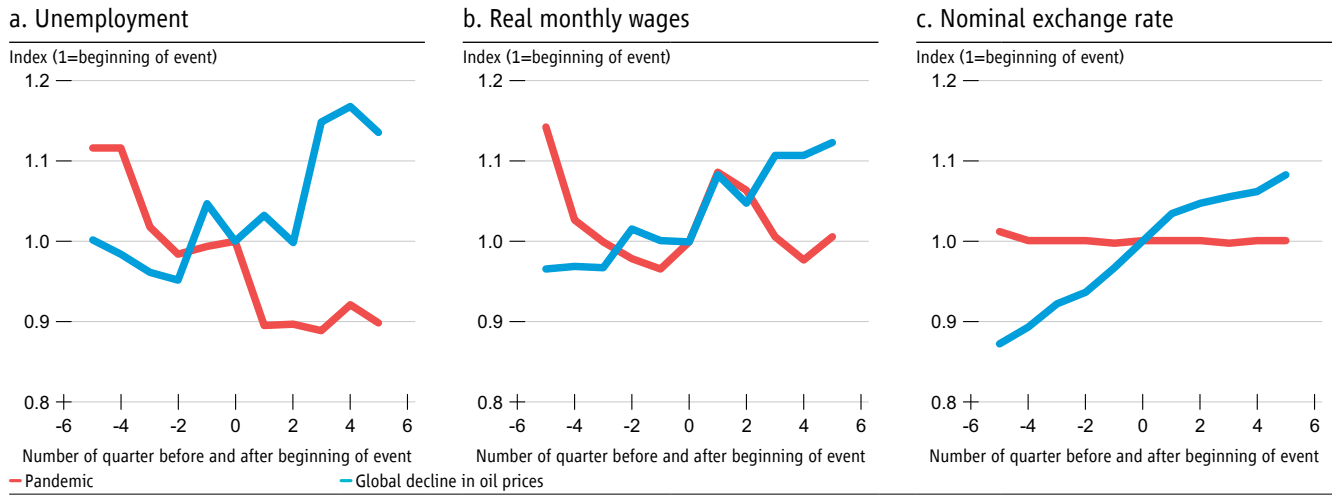
The impact of terms of trade shocks may depend largely on the channels through which the commodity price changes affect consumer prices and inflation. During the 2014/15 global decline in oil prices, the terms of trade index in the Islamic Republic of Iran fell 23 percent. Figure 6.2 compares the labor market adjustments there following the oil price shock with labor market adjustments following the COVID-19 shock (both of which were recessionary shocks). As the oil price shock was associated with a decline in aggregate demand, it resulted in lower levels of inflation (12.5 percent) than during the pandemic (30 percent).

Figure 6.2 Inflation and economic growth rates in the Islamic Republic of Iran, 2012–22**a. Inflation rate****b. GDP growth rate**

Source: Central Bank of Iran.

After the oil price shock, which reduced aggregate demand and put downward pressure on prices, the labor market adjusted through higher unemployment. Unemployment rate rose by around 5 percent in the quarter following the shock and by up to 15 percent three quarters later, even though real wages continued to increase. Unemployment was less sensitive to the pandemic shock, during which inflation spiked as real wages adjusted downward.

Figure 6.3 Unemployment and wages following terms of trade shocks and the COVID-19 pandemic in the Islamic Republic of Iran



Source: Data on unemployment rates are from the International Labor Organization. Data on wages are from Household Income and Expenditure Surveys. Data on the nominal exchange rate are from the International Financial Statistics of the International Monetary Fund.
 Note: All series are seasonally adjusted. The real wage indices are obtained by dividing data points by corresponding quarterly Consumer Price Index values. For the global decline in oil prices shock, all outcomes are indexed to 1 in 2015Q2 (the quarter preceding the recession). For the pandemic, all outcomes are indexed to 1 in 2019Q4 (the quarter preceding the recession).

CHAPTER 7 LABOR SCARRING AND DECLINES IN THE STANDARDS OF LIVING

Chapter 7 takeaways:

- Labor market adjustments to shocks depend on the type of shock and the inflation context.
- Adjustments through quantities may lead to labor scarring, defined as long-term losses, as reflected in long-term wage losses and higher probabilities of unemployment and informal employment.
- Price adjustments erode real wages, with dire implications for standards of living and inequality in the short run.
- Public policies should protect vulnerable workers with cash transfers while allowing real wages to adjust, in order to reduce the long-term costs of job losses.

Labor market adjustments depend on the type of shock and the inflation context in which shocks occur. How labor markets adjust may have implications for labor scarring and standards of living.

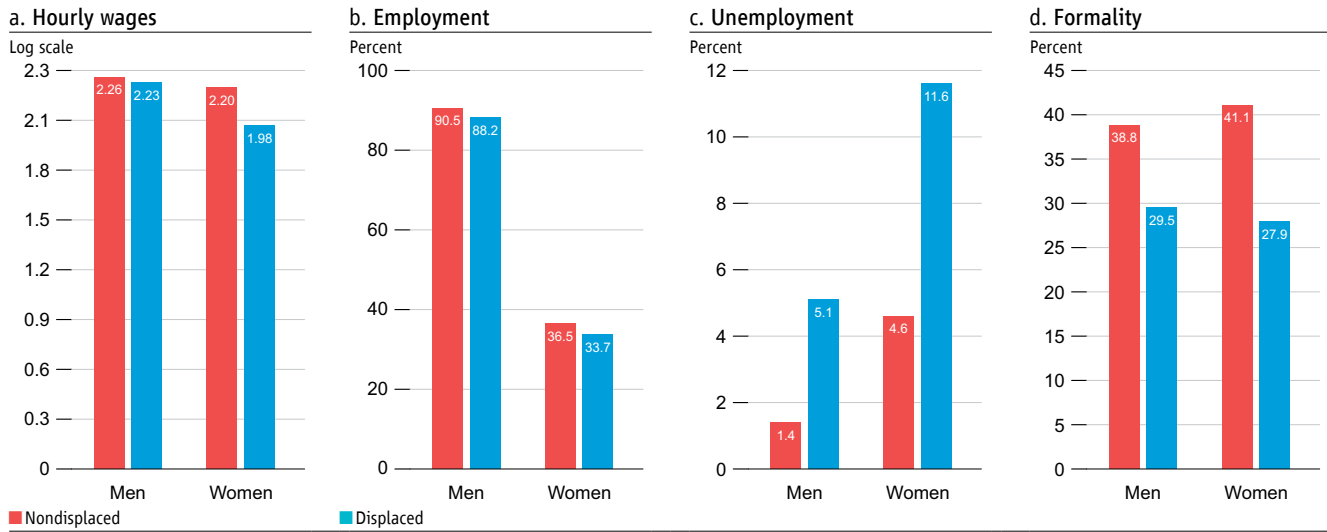
7.1 Long-term negative consequences of job displacement

Job loss can have long-term negative effects on workers, often leading to labor scarring—long-term wage losses that persist for several years following job separations and increases in the probability of unemployment or informality. When individuals experience job losses, especially during economic downturns, they often face difficulties finding new employment. Prolonged unemployment can result in a loss of skills. This decline in human capital makes it harder for them to secure comparable employment in the future.

The literature, most of which has been conducted in advanced countries, consistently finds significant long and lasting wage losses after job displacement. Several studies of the United States show that displaced workers face a greater likelihood of unemployment following layoffs and are permanently scarred in terms of earnings potential (see Ruhm 1991; Jacobson, LaLonde, and Sullivan 1993; Pissarides, 1992; Kroft, Lange, and Notowidigdo 2013; and Filomena 2021). A study on Mexico (Arias and Lederman 2023) finds that job displacements caused by plant closings are associated with real wage losses up to 10 years after the plant closing.

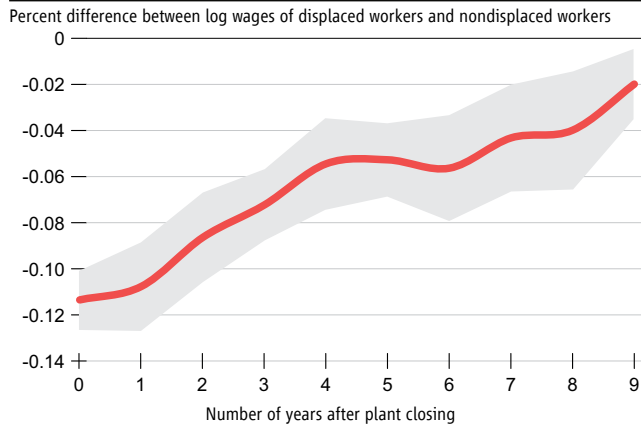
The analysis presented here uses data from the 2018 Egypt Labor Market Panel Survey to study the implications of involuntary job displacement on workers. Thanks to the availability of retrospective information tracking individuals' job trajectories, workers who were ever subject to involuntary job displacement in any of the jobs they reported and individuals who were never displaced involuntarily from their jobs can be identified. Involuntary job displacement refers to the loss of a job because of termination of the job by the employer, the suspension of the project, or a firm shutdown. Workers who had ever been involuntarily displaced—men and women alike—had lower hourly wages, a lower likelihood of employment, higher unemployment, and high informality rates at the time of the survey (figure 7.1).

Figure 7.1 Effect of involuntary job displacement on wages, employment, unemployment, and formality in Egypt



Source: Data are from the Egypt Labor Market Panel Survey 2018.
 Note: The analysis is restricted to the working-age population (15–64). Employment and unemployment are defined with a reference period of three months. Individuals were asked about their employment and unemployment status in the three months that preceded the survey. Unemployment requires active job search. Formality is defined as having either a work contract or social security.

Figure 7.2 Effect of involuntary job displacement in Mexico



Source: Arias and Lederman 2023.
 Note: The solid line plots the coefficients (the wage gap). The dotted lines plot the 95 percent confidence intervals. Standard errors are clustered at the state level. All regressions control for years of education, gender, marital status, age, age squared, state, and industry fixed effects.

Figure 7.3 Effect of involuntary job displacement in Egypt



Source: Data are from the Egypt Labor Market Panel Survey 2018.
 Note: The analysis is restricted to the working-age population (15–64). Regression coefficients are reported from a regression specification in which the main variable of interest is a dummy variable indicator for ever having been displaced as a result of termination or suspension (relative to never having been involuntarily displaced). The regression specification includes the following regressors: four dummies for the highest level of educational attainment (no education, primary or preparatory education, secondary education vocational or general, and post-secondary education either post-university institute or university and above) and dummies for being married, age and age squared, and rural residency. The regressions control for year of last job separation fixed effects.

Some of the differences between displaced and nondisplaced workers become insignificant once observable individual characteristics and job separation year fixed effects are accounted for. On average, displaced workers were separated from their jobs roughly 10 years before the survey. Ten years later, displaced male workers in Egypt did not have significantly lower wages than nondisplaced workers. Displaced female workers, on the other hand, face large wage penalties even 10 years post-displacement. However, the absence of panel data on wages post-displacement made it impossible to replicate standard earning scarring estimates, which track the gap between the wage of displaced and nondisplaced workers over time. Arias and Lederman (2023) find that two years after the closure of a plant in Mexico, the wages of displaced workers were 11 percent lower than those of nondisplaced workers but that wages almost fully recovered nine years after the closure (figure 7.2).

Evidence from Egypt (figure 7.3) suggests that displaced workers experience a higher likelihood of being unemployed or informally employed than nondisplaced workers even 10 years after displacement. Among men, workers who had been displaced had a higher likelihood of unemployment (3 percentage points) and informality (9 percentage points). Among women, displaced workers were 8 percentage points more likely to be unemployed, but they do not seem to have had a significantly higher likelihood of informality.

Labor market scarring can also occur as a result of increases in informality and under-employment. A study of Brazil shows that individuals who experienced high levels of youth unemployment and informality tend to fare systematically worse than others in the labor market as adults, especially during early adulthood (Cruces, Ham, and Viollaz 2012). They estimate that each additional percentage point of youth informality results in an increase of approximately 0.5–0.7 percent in adult informality for men and 0.5–0.8 percent for women. In Indonesia, another country with high informality rates, Pritadrajati, Kusuma, and Saxena (2021) show that the duration of self-employment in the informal sector has a detrimental effect on male workers, with each additional year of self-employment linked to a decrease in future earnings of 1.42 percent.

7.2 Wage erosion: Deepening income inequality and disproportionately affecting the poor

The distributional consequences of large currency devaluations can exacerbate income inequality. During the 2016 currency devaluation in Egypt, 4 percent of the exchange rate changes were passed through to prices immediately after the devaluation, and 9 percent were passed through over the six months following the devaluation. Alazzawi and Hlasny (2019) estimate that the average household faced an increase of as much as 50 percent in the cost of living, with even larger increases among the poorest households.

In other episodes of currency devaluation in Egypt, such as the 67 percent decline in the nominal exchange rate between 2000 and 2005, welfare losses among the poor were also disproportionately large (Kraay 2007). In Mexico, the large devaluation in 1994 raised the cost of living by roughly 1.5 times more for the bottom income decile than for the top income decile two years after the devaluation (Cravino and Levchenko 2017).

These results are consistent with the findings of the April 2023 *MENA Economic Update*, which show that the poorest households experience higher levels of inflation than the richest households. In December 2022, for instance, poor households in MENA experienced about 2 percentage points more inflation (year-on-year) than rich households (Gatti and others 2023).

7.3 Policy options for addressing labor market challenges

The policy response to labor market adjustments depends partly on whether that adjustment occurs through quantities or prices. Job losses and informal employment may have long-lasting scarring effects. Workers who lose their jobs may be scarred temporarily or permanently and see their human capital depreciate.

Adjustments through lower real wages in high-inflation contexts raise other concerns. Lower real wages mean that individuals' purchasing power decreases, which can lead to a decline in standards of living in the short run and widen existing inequalities. These costs are often borne most heavily by the poor and marginalized.

It is important to maintain the flexibility of the price adjustment channel. Indexing wages to inflation or to the exchange rate shuts down the price adjustment channel, forcing labor markets to adjust exclusively through quantities. Such adjustments lead to labor scarring and change the composition of the labor force, possibly increasing the long-term level of informality.

Price adjustment may be preferable to adjustments through quantities because of the difficulty of addressing labor scarring. Policies that deal with the negative consequences of job separations, such as active labor market policies (ALMPs), lead to ambiguous results.³² For instance, Card, Kluve, and Weber (2010) provide a meta-analysis drawn from 97 studies on active labor market policies (ALMPs) conducted between 1995 and 2007. They find that public sector employment programs were not effective and that job search assistance programs were more likely to yield positive effects. They show that on-the-job training programs have either negative or insignificant effects in the short term and may be positive only in the medium term. More recent studies corroborate these findings (Brown and Koettl 2015; Card, Kluve, and Weber 2018).

A meta-study on the impact ALMPs on youth by the World Bank and the International Labor Organization (ILO) notes that the effectiveness of ALMPs in improving the labor market outcomes of youth depends on the type of program and how an intervention is designed and implemented (ILO 2022). It finds that entrepreneurship and skills training interventions yield positive outcomes, whereas employment services and subsidized employment programs do not. These results lie in contrast to those of Card, Kluve and Weber (2010). The meta-analysis suggests that longer-duration and multipronged ALMPs are more effective than other policies.

The literature also finds that interventions aimed at inducing formalization tend to be ineffective. A meta-analysis by Floridi, Demena, and Wagner (2020) spanning 27 studies on interventions ranging from simplifying registration procedures to increasing law enforcement finds no evidence that interventions increase formalization.

In contrast, the evidence suggests that policies that deal with the immediate negative consequences of price adjustment, such as social safety nets, work. Large-scale cash transfer programs have had documented effects on a broad range of outcomes, including consumption, assets, and psychological well-being (Haushofer and Shapiro 2016; Baird, McIntosh, and Özler 2011; Bastagli and others 2016). Egger and others (2022) show that large cash transfers in rural Kenya increased both consumption and assets for recipients and that the spillover effects on nonrecipient households and firms were large. The 2019 *World Development Report* highlights the effectiveness of social protection schemes, which increase the human capital of current and future generations, as measured by higher school enrollment, food security, cognitive development, and mental well-being (World Bank 2018).³³

Lessons learned after the COVID-19 pandemic emphasize the increasing importance of policy dialogue in MENA to build social protection programs that can effectively and efficiently meet the needs of the most vulnerable populations (Kamurase and Willenborg 2021).

³² This is in line with the 2013 World Development Report, which highlights the effectiveness of active labor market policies depend on design and implementation. The report also emphasizes that even when they are well designed, their effects tend to be modest.

³³ Job retention schemes can be an effective tool to help labor markets weather temporary economic shocks. These schemes have been the main instrument employed in most OECD countries to mitigate the negative effects of the COVID-19 shock on labor markets. The 2021 OECD Employment Outlook claims that these types of programs were effective in limiting job losses and preventing a surge in unemployment after the COVID-19 shock with limited evidence of hindered job creation (OECD 2021). Yet, with the benefit of hindsight, it's also obvious that countries such as the US, that used cash transfers, have a much healthier and tighter labor market post-2020 than Europe.

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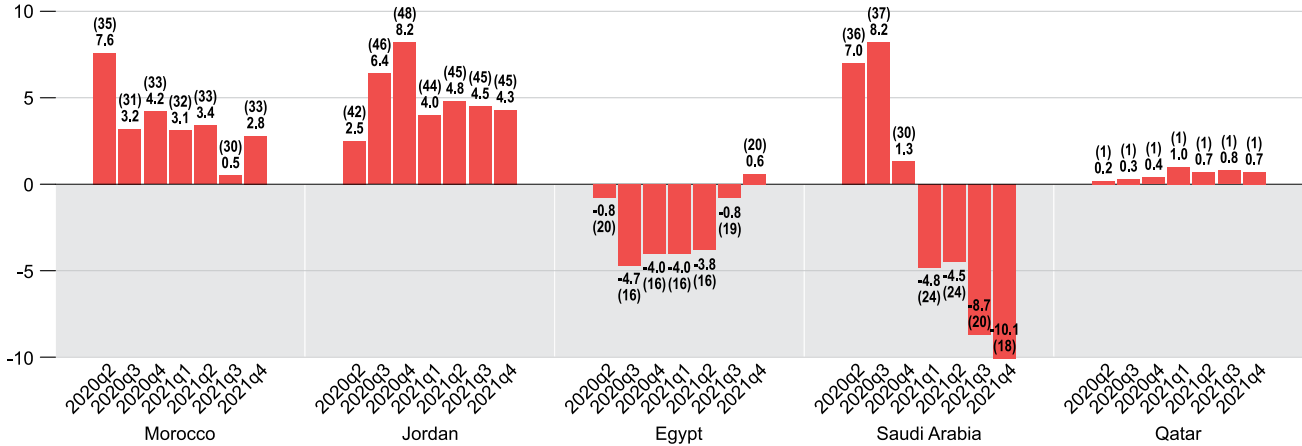
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Appendix A Impact of COVID-19 Pandemic on Unemployment, by Age and Migration Status

Figure A.1 Percentage-point change in unemployment of youth and adults in five countries in the Middle East and North Africa that can be attributed to the COVID-19 shock

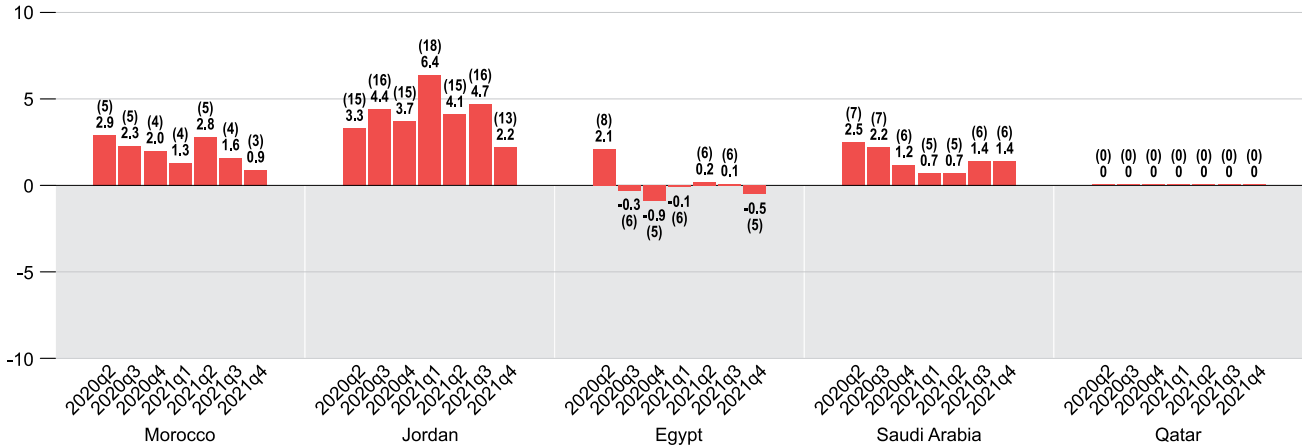
a. Youth (15–24)

Percentage-point change



b. Adults^a

Percentage-point change

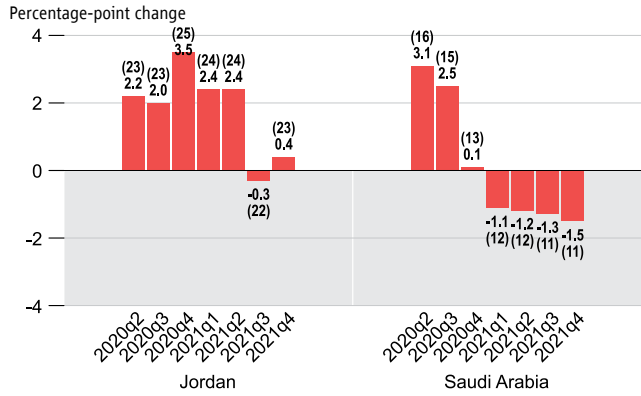


Source: Egypt: National estimates from the International Labor Organization. Jordan: Labor Force Survey microdata. Morocco: Haut Commissariat au Plan (HCP). Qatar: Planning and Statistics Authority (PSA). Saudi Arabia: General Authority for Statistics (GASTAT).

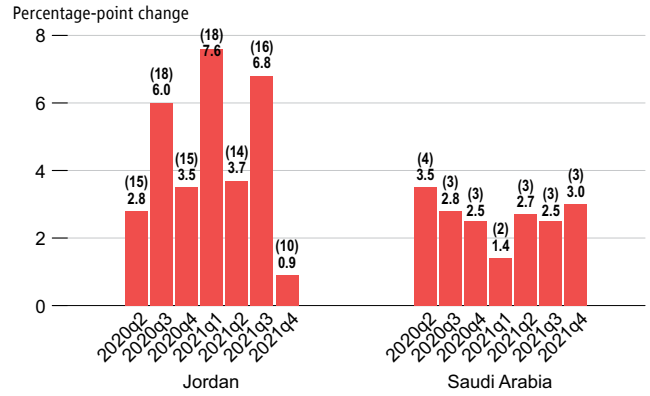
Note: See box B.1 for the methodology. Actual unemployment rates are in parentheses. a) For Egypt, Jordan, and Saudi Arabia, the adult population includes people 25 and older. In Morocco, the adult population includes people 45 and over. In Qatar, the adult population includes people 25–44.

Figure A.2 Percentage-point change in unemployment among citizens and non-nationals in Jordan and Saudi Arabia that can be attributed to the COVID-19 shock

a. Unemployment among citizens



b. Unemployment among non-nationals



Source: Jordan: Labor Force Survey microdata. Saudi Arabia: General Authority for Statistics (GASTAT).
 Note: See box B.1 for the methodology. Actual unemployment rates are in parentheses.

Appendix B Aggregate Labor Market Indicators in the Middle East and North Africa

Table B.1 Aggregate labor market indicators in the Middle East and North Africa, by country										
Income group/ economy	Unemployment rate (percent)	Employment- to-population ratio (percent)	Labor force participation (percent)	Average weekly hours worked	Nominal monthly earnings (local currency unit)	Real monthly earnings (local currency unit)	Real monthly earnings (dollars)	Change in real dollar earnings since 2019 (percent)	Informal employment (percent)	GDP per capita (PPP, constant 2017 international dollars)
High-income										
Qatar	0.1 (2022)	87.2 (2022)	87.4 (2022)	47.0 (2020)	1,1742.0 (2022)	9,720.2 (2022)	2,670.4 (2022)	0.3 (2022)	—	97,096.9 (2022)
United Arab Emirates	3.1 (2021)	74.4 (2021)	76.8 (2021)	52.6 (2009)	7,450.6 (2009)	7,516.0 (2009)	2,046.6 (2009)	—	—	74,299.0 (2022)
Bahrain	1.2 (2012)	70.9 (2015)	71.6 (2015)	—	353.0 (2020)	304.3 (2020)	809.2 (2020)	9.6 (2020)	—	51,854.7 (2022)
Saudi Arabia	5.6 (2022)	57.6 (2022)	61.1 (2022)	—	6,625.0 (2022)	5,119.8 (2022)	1,365.3 (2022)	-4.3 (2022)	—	50,022.9 (2022)
Kuwait	2.2 (2016)	72.2 (2016)	73.8 (2016)	—	353.0 (2016)	289.6 (2016)	958.4 (2016)	—	—	49,168.6 (2022)
Oman	1.9 (2021)	59.2 (2021)	66.6 (2021)	—	—	—	—	—	—	35,336.9 (2022)
Median 2022 without MENA	5.0	58.7	61.9	36.3	N/A	N/A	2,973	-3.3	31	42,898.0
Upper-middle income										
Libya	19.0 (2012)	38.7 (2012)	47.8 (2012)	—	—	—	—	—	—	19,796.6 (2022)
Iraq	16.2 (2021)	33.2 (2021)	39.7 (2021)	29.7 (2021)	—	—	—	—	67.0 (2021)	9,199.0 (2022)
West Bank and Gaza	24.4 (2022)	34.0 (2022)	45.0 (2022)	38.0 (2022)	3,067.5 (2022)	2,588.9 (2021)	801.5 (2021)	15.8 (2021)	53.9 (2022)	5,722.4 (2022)
Median 2022 without MENA	5.0	58.5	63.2	41.6	N/A	N/A	261.0	-15.3	57.0	15,093.0
Lower-middle income										
Iran, Islamic Rep.	9.0 (2022)	37.2 (2022)	40.9 (2022)	44.1 (2021)	25,449,673 (2020)	3,537,133 (2020)	84.2 (2020)	4.2 (2020)	—	15,308.0 (2022)
Egypt, Arab Rep.	7.2 (2022)	39.8 (2021)	42.7 (2022)	43.3 (2021)	3,031 (2021)	950 (2021)	60.75 (2021)	17.1 (2021)	67.0 (2019)	12,780.8 (2022)
Algeria	12.0 (2017)	36.9 (2017)	41.8 (2017)	—	—	—	—	—	—	11,187.4 (2022)
Tunisia	15.5 (2022)	40.5 (2019)	48.9 (2019)	43.4 (2019)	739.7 (2019)	476.2 (2019)	162.3 (2019)	—	36.9 (2019)	10,577.7 (2022)

Table B.1 Aggregate labor market indicators in the Middle East and North Africa, by country

Income group/ economy	Unemployment rate (percent)	Employment- to-population ratio (percent)	Labor force participation (percent)	Average weekly hours worked	Nominal monthly earnings (local currency unit)	Real monthly earnings (local currency unit)	Real monthly earnings (dollars)	Change in real dollar earnings since 2019 (percent)	Informal employment (percent)	GDP per capita (PPP, constant 2017 international dollars)
Jordan	18.3 (2022)	31.5 (2022)	38.5 (2022)	47.0 (2021)	337.1 (2021)	263.9 (2021)	371.7 (2021)	3.6 (2021)	51.6 (2021)	9,318.7 (2022)
Morocco	11.9 (2022)	39.1 (2022)	44.3 (2022)	45.0 (2021)	—	—	—	—	—	8,061.5 (2022)
Djibouti	26.1 (2017)	23.9 (2017)	32.3 (2017)	—	95,504.3 (2017)	82,178.4 (2017)	462.4 (2017)	—	50.5 (2017)	4,991.0 (2022)
Lebanon	29.6 (2022)	30.5 (2022)	43.4 (2022)	46.9 (2019)	1,175,862.2 (2019)	904,338.2 (2019)	599.9 (2019)	—	62.4 (2022)	—
Median 2022 without MENA	5.6	59.3	63.1	45.4	N/A	N/A	141.0	-16.3	56.0	4,882.0
Low-income										
Syria	8.6 (2010)	—	43.4 (2011)	—	11,344.0 (2010)	11,344.0 (2010)	1,010.6 (2010)	—	—	—
Yemen	13.5 (2014)	31.4 (2014)	36.2 (2014)	39.2 (2014)	61,426.1 (2014)	38,980.1 (2014)	181.4 (2014)	—	77.4 (2014)	—
Median 2022 without MENA	15.1	51.1	60.2	28.8	N/A	N/A	15.0	—	87.0	1,569.0

Source: Data on unemployment rate, employment-to-population ratio, and labor force participation rate come from national estimates from the International Labor Organization (ILO) for the following economies: Algeria, Bahrain, Djibouti, Iraq, Kuwait, Libya, Oman, Syria, the United Arab Emirates, the West Bank and Gaza, and Yemen. Data sources for other countries are as follows: Arab Republic of Egypt: Central Agency for Public Mobilization and Statistics (CAPMAS); Islamic Republic of Iran: Statistical Centre of Iran (SCI); Jordan: Department of Statistics (DOS); Lebanon: Central Administration of Statistics (CAS); Morocco: Haut Commissariat au Plan (HCP); Qatar: Planning and Statistics Authority (PSA); Saudi Arabia: General Authority for Statistics (GASTAT); Tunisia: Institut National de la Statistique (INS). For Iran, data for 2022 refer to labor market indicators in the Iranian year 1401 (March 21, 2022–March 20, 2023). Data for Lebanon are from the 2022 Labor Force Survey conducted in January 2022 jointly by the ILO and the Central Administration of Statistics (CAS) of Lebanon. Estimates for Jordan, Qatar, and Saudi Arabia include both citizens and noncitizens. Data on mean weekly hours worked for employees come from national estimates by the ILO based on Labor Force Survey data. Monthly earnings data are from national estimates by the ILO, except for the Islamic Republic of Iran, Saudi Arabia, and Qatar. Data for these countries come from the following sources: Islamic Republic of Iran: SCI; Saudi Arabia: GASTAT; Qatar: PSA. Estimates for Egypt were computed from the Labor Force Survey (LFS) data provided by the Economic Research Forum (ERF). Average nominal monthly earnings are reported in local currency units (LCU). Real monthly earnings in LCU are adjusted for inflation using Consumer Price Index (CPI) data (indexed at 100 in 2010) from the World Bank databank. Real monthly earnings in dollars are calculated by dividing real monthly earnings in LCU by the annual average exchange rates for each country from the *Global Economic Monitor*. Data on informal employment rate come from ILO national estimates, except for Lebanon, for which data come from the CAS. Information on GDP per capita are from the World Bank databank.

Note: Data on unemployment rate, employment-to-population ratio, and labor force participation rate are for people 15 and over. The most recent year for a given country is reported in parentheses. The dash indicates missing data. N/A indicates not applicable.

Table B.2 Aggregate labor market indicators for men in the Middle East and North Africa, by country										
Income group/ economy	Unemployment rate (percent)	Employment- to-population ratio (percent)	Labor force participation (percent)	Average weekly hours worked	Nominal monthly earnings (local currency unit)	Real monthly earnings (local currency unit)	Real monthly earnings (dollars)	Change in real dollar earnings since 2019 (percent)	Informal employment (percent)	GDP per capita, (PPP, constant 2017 international dollars)
High income										
Qatar	0.1 (2022)	95.2 (2022)	95.3 (2022)	47.0 (2020)	11,582.0 (2022)	9,587.7 (2022)	2,634.0 (2022)	-4.8 (2022)	—	97,096.9 (2022)
United Arab Emirates	2.1 (2021)	88.4 (2021)	90.3 (2021)	51.6 (2009)	7,917.6 (2009)	7,987.1 (2009)	2,174.8 (2009)	—	—	74,299.0 (2022)
Bahrain	0.5 (2012)	86.8 (2015)	86.9 (2015)	—	336.0 (2020)	289.6 (2020)	770.2 (2020)	9.7 (2020)	—	51,854.7 (2022)
Saudi Arabia	2.6 (2022)	77.5 (2022)	79.6 (2022)	—	6,791.0 (2022)	5,248.1 (2022)	1,399.5 (2022)	-1.6 (2022)	—	50,022.9 (2022)
Kuwait	0.9 (2016)	87.0 (2016)	87.8 (2016)	—	—	—	—	—	—	49,168.6 (2022)
Oman	1.1 (2021)	76.7 (2021)	83.8 (2021)	—	—	—	—	—	—	35,336.9 (2022)
Median 2022 without MENA	5.1	65.5	67.9	38.5	N/A	N/A	3,368.0	-5.1	32.0	42,898.0
Upper-middle income										
Libya	15.9 (2012)	51.3 (2012)	61.0 (2012)	—	—	—	—	—	—	19,796.6 (2022)
Iraq	14.3 (2021)	58.5 (2021)	68.2 (2021)	31.8 (2021)	—	—	—	—	69.8 (2021)	9,199.0 (2022)
West Bank and Gaza	20.3 (2022)	56.4 (2022)	70.7 (2022)	39.1 (2022)	3,214.5 (2022)	2,694.1 (2021)	834.1 (2021)	15.7 (2021)	55.5 (2022)	5,722.4 (2022)
Median 2022 without MENA	4.6	68.9	74.5	43.2	—	—	283.0	-16.4	57.0	15,093.0
Lower-middle income										
Iran, Islamic Rep.	7.7 (2022)	63.0 (2022)	68.2 (2022)	45.5 (2021)	—	—	—	—	—	15,308.0 (2022)
Egypt, Arab Rep.	5.6 (2021)	65.2 (2021)	69.1 (2021)	44.0 (2021)	3119 (2021)	978 (2021)	62.5 (2021)	17.3 (2021)	69.7 (2019)	12,780.8 (2022)
Algeria	9.8 (2017)	60.0 (2017)	66.0 (2017)	—	—	—	—	—	—	11,187.4 (2022)
Tunisia	13.3 (2022)	61.0 (2019)	70.8 (2019)	44.1 (2019)	780.5 (2019)	502.5 (2019)	171.2 (2019)	—	39.3 (2019)	10,577.7 (2022)

Table B.2 Aggregate labor market indicators for men in the Middle East and North Africa, by country

Income group/ economy	Unemployment rate (percent)	Employment- to-population ratio (percent)	Labor force participation (percent)	Average weekly hours worked	Nominal monthly earnings (local currency unit)	Real monthly earnings (local currency unit)	Real monthly earnings (dollars)	Change in real dollar earnings since 2019 (percent)	Informal employment (percent)	GDP per capita, (PPP, constant 2017 international dollars)
Jordan	16.4 (2022)	50.5 (2022)	60.5 (2022)	48.0 (2021)	334.7 (2021)	262.0 (2021)	369.1 (2021)	3.4 (2021)	55.1 (2021)	9,318.7 (2022)
Morocco	10.3 (2022)	62.7 (2021)	69.6 (2022)	46.0 (2021)	—	—	—	—	—	8,061.5 (2022)
Djibouti	22.1 (2017)	36.6 (2017)	47.0 (2017)	—	95,293.9 (2017)	81,997.4 (2017)	461.4 (2017)	—	45.7 (2017)	4,991.0 (2022)
Lebanon	28.4 (2022)	47.4 (2022)	66.2 (2022)	50.3 (2019)	1,160,065.1 (2019)	892,188.9 (2019)	591.8 (2019)	—	64.5 (2022)	—
Median 2022 without MENA	4.4	70.2	73.4	47.2	N/A	N/A	168.0	24.4	60.0	4,882.0
Low income										
Syria	6.2 (2010)	—	71.2 (2011)	—	11,227.0 (2010)	11,227.0 (2010)	1,000.2 (2010)	—	—	—
Yemen	12.3 (2014)	57.3 (2014)	65.4 (2014)	39.6 (2014)	62,064.0 (2014)	39384.9 (2014)	183.3 (2014)	—	77.0 (2014)	—
Median 2022 without MENA	13.7	57.2	66.2	30.7	N/A	N/A	18.0	—	85.0	1,569.0

Source: Data on unemployment rate, employment-to-population ratio, and labor force participation rate come from national estimates from the International Labor Organization (ILO) for the following economies: Algeria, Bahrain, Djibouti, Iraq, Kuwait, Libya, Oman, Syria, the United Arab Emirates, the West Bank and Gaza, and Yemen. Data sources for other countries are as follows: Arab Republic of Egypt: Central Agency for Public Mobilization and Statistics (CAPMAS); Islamic Republic of Iran: Statistical Centre of Iran (SCI); Jordan: Department of Statistics (DOS); Lebanon: Central Administration of Statistics (CAS); Morocco: Haut Commissariat au Plan (HCP); Qatar: Planning and Statistics Authority (PSA); Saudi Arabia: General Authority for Statistics (GASTAT); Tunisia: Institut National de la Statistique (INS). For Iran, data for 2022 refer to labor market indicators in the Iranian year 1401 (March 21, 2022–March 20, 2023). Data for Lebanon are from the 2022 Labor Force Survey conducted in January 2022 jointly by the ILO and the Central Administration of Statistics (CAS) of Lebanon. Estimates for Jordan, Qatar, and Saudi Arabia include both citizens and noncitizens. Data on mean weekly hours worked for employees come from national estimates by the ILO based on Labor Force Survey data. Monthly earnings data are from national estimates by the ILO, except for the Islamic Republic of Iran, Saudi Arabia, and Qatar. Data for these countries come from the following sources: Islamic Republic of Iran: SCI; Saudi Arabia: GASTAT; Qatar: PSA. Estimates for Egypt were computed from the Labor Force Survey (LFS) data provided by the Economic Research Forum (ERF). Average nominal monthly earnings are reported in local currency units (LCU). Real monthly earnings in LCU are adjusted for inflation using Consumer Price Index (CPI) data (indexed at 100 in 2010) from the World Bank databank. Real monthly earnings in dollars are calculated by dividing real monthly earnings in LCU by the annual average exchange rates for each country from the *Global Economic Monitor*. Data on informal employment rate come from ILO national estimates, except for Lebanon, for which data come from the CAS. Information on GDP per capita are from the World Bank databank.

Note: Data on unemployment rate, employment-to-population ratio, and labor force participation rate are for people 15 and over. The most recent year for a given country is reported in parentheses. The dash indicates missing data. N/A indicates not applicable.

Table B.3 Aggregate labor market indicators for women in the Middle East and North Africa, by country										
Income group/ economy	Unemployment rate (percent)	Employment- to-population ratio (percent)	Labor force participation (percent)	Average weekly hours worked	Nominal monthly earnings (local currency unit)	Real monthly earnings (local currency unit)	Real monthly earnings (dollars)	Change in real dollar earnings since 2019 (percent)	Informal employment (percent)	GDP per capita (PPP, constant 2017 international dollars)
High income										
Qatar	0.4 (2022)	61.4 (2022)	61.7 (2022)	45.0 (2020)	12,188.0 (2022)	10,089.4 (2022)	2,771.8 (2022)	14.8 (2022)	—	97,096.9 (2022)
United Arab Emirates	6.2 (2021)	49.3 (2021)	52.6 (2021)	56.7 (2009)	5,551.0 (2009)	5,599.7 (2009)	1,524.8 (2009)	—	—	74,299.0 (2022)
Bahrain	3.9 (2012)	42.0 (2015)	43.5 (2015)	—	465.0 (2020)	400.8 (2020)	1,065.9 (2020)	8.6 (2020)	—	51,854.7 (2022)
Saudi Arabia	15.4 (2022)	29.2 (2022)	34.5 (2022)	—	5,873.0 (2022)	4,538.6 (2022)	1,210.3 (2022)	-17.0 (2022)	—	50,022.9 (2022)
Kuwait	5.8 (2016)	47.0 (2016)	49.9 (2016)	—	—	—	—	—	—	49,168.6 (2022)
Oman	5.6 (2021)	28.9 (2021)	35.0 (2021)	—	—	—	—	—	—	35,336.9 (2022)
Median 2022 without MENA	4.8	53.6	56.2	33.7	N/A	N/A	2,562.0	-0.5	29.8	42,898.0
Upper-middle income										
Libya	25.1 (2012)	25.3 (2012)	33.8 (2012)	—	—	—	—	—	—	19,796.6 (2022)
Iraq	28.3 (2021)	7.7 (2021)	10.8 (2021)	17.5 (2021)	—	—	—	—	45.4 (2021)	9,199.0 (2022)
West Bank and Gaza	40.4 (2022)	11.1 (2022)	18.6 (2022)	32.0 (2022)	2,288.3 (2022)	2,031.8 (2021)	629.0 (2021)	14.1 (2021)	45.4 (2022)	5,722.4 (2022)
Median 2022 without MENA	5.5	48.0	53.0	39.1	N/A	N/A	222.6	-13.2	56.2	15,093.5
Lower-middle income										
Iran, Islamic Rep.	15.8 (2022)	11.4 (2022)	13.6 (2022)	36.8 (2021)	—	—	—	—	—	15,308.0 (2022)
Egypt, Arab Rep.	16.1 (2021)	12.9 (2021)	15.3 (2021)	39.0 (2021)	2,669.0 (2021)	837.0 (2021)	53.5 (2021)	20.97 (2021)	51.9 (2019)	12,780.8 (2022)
Algeria	20.6 (2017)	13.5 (2017)	17.1 (2017)	—	—	—	—	—	—	11,187.4 (2022)
Tunisia	20.5 (2022)	21.0 (2019)	28.1 (2019)	41.5 (2019)	678.1 (2019)	436.6 (2019)	148.8 (2019)	—	30.3 (2019)	10,577.7 (2022)

Table B.3 Aggregate labor market indicators for women in the Middle East and North Africa, by country

Income group/ economy	Unemployment rate (percent)	Employment- to-population ratio (percent)	Labor force participation (percent)	Average weekly hours worked	Nominal monthly earnings (local currency unit)	Real monthly earnings (local currency unit)	Real monthly earnings (dollars)	Change in real dollar earnings since 2019 (percent)	Informal employment (percent)	GDP per capita (PPP, constant 2017 international dollars)
Jordan	27.0 (2022)	10.0 (2022)	13.8 (2022)	42.3 (2021)	348.9 (2021)	273.1 (2021)	384.7 (2021)	4.2 (2021)	32.4 (2021)	9,318.7 (2022)
Morocco	17.3 (2022)	17.4 (2021)	19.8 (2022)	40.0 (2021)	—	—	—	—	—	8,061.5 (2022)
Djibouti	35.9 (2017)	11.7 (2017)	18.2 (2017)	—	96,432.8 (2017)	82,977.4 (2017)	466.9 (2017)	—	64.9 (2017)	4,991.0 (2022)
Lebanon	32.7 (2022)	14.9 (2022)	22.2 (2022)	39.1 (2019)	1,215,150.6 (2019)	934,554.3 (2019)	619.9 (2019)	—	56.4 (2022)	—
Median 2022 without MENA	5.4	50.6	53.5	44.9	N/A	N/A	150.0	-27.9	53.0	4,882.0
Low income										
Syria	22.0 (2010)	—	14.8 (2011)	—	11,981.0 (2010)	11,981.0 (2010)	1,067.3 (2010)	—	—	—
Yemen	26.1 (2014)	4.5 (2014)	6.0 (2014)	30.3 (2014)	47,830.7 (2014)	30,352.6 (2014)	141.2 (2014)	—	82.2 (2014)	—
Median 2022 without MENA	16.6	45.7	54.8	26.4	N/A	N/A	11.0	—	89.0	1,569.0

Source: Data on unemployment rate, employment-to-population ratio, and labor force participation rate come from national estimates from the International Labor Organization (ILO) for the following economies: Algeria, Bahrain, Djibouti, Iraq, Kuwait, Libya, Oman, Syria, the United Arab Emirates, the West Bank and Gaza, and Yemen. Data sources for other countries are as follows: Arab Republic of Egypt: Central Agency for Public Mobilization and Statistics (CAPMAS); Islamic Republic of Iran: Statistical Centre of Iran (SCI); Jordan: Department of Statistics (DOS); Lebanon: Central Administration of Statistics (CAS); Morocco: Haut Commissariat au Plan (HCP); Qatar: Planning and Statistics Authority (PSA); Saudi Arabia: General Authority for Statistics (GASTAT); Tunisia: Institut National de la Statistique (INS). For Iran, data for 2022 refer to labor market indicators in the Iranian year 1401 (March 21, 2022–March 20, 2023). Data for Lebanon are from the 2022 Labor Force Survey conducted in January 2022 jointly by the ILO and the Central Administration of Statistics (CAS) of Lebanon. Estimates for Jordan, Qatar, and Saudi Arabia include both citizens and noncitizens. Data on mean weekly hours worked for employees come from national estimates by the ILO based on Labor Force Survey data. Monthly earnings data are from national estimates by the ILO, except for the Islamic Republic of Iran, Saudi Arabia, and Qatar. Data for these countries come from the following sources: Islamic Republic of Iran: SCI; Saudi Arabia: GASTAT; Qatar: PSA. Estimates for Egypt were computed from the Labor Force Survey (LFS) data provided by the Economic Research Forum (ERF). Average nominal monthly earnings are reported in local currency units (LCU). Real monthly earnings in LCU are adjusted for inflation using Consumer Price Index (CPI) data (indexed at 100 in 2010) from the World Bank databank. Real monthly earnings in dollars are calculated by dividing real monthly earnings in LCU by the annual average exchange rates for each country from the *Global Economic Monitor*. Data on informal employment rate come from ILO national estimates, except for Lebanon, for which data come from the CAS. Information on GDP per capita are from the World Bank databank.

Note: Data for are for people 15 and over. The most recent year for each indicator for a given country is reported in parentheses. The dash indicates missing data. N/A indicates not applicable.

MIDDLE EAST AND NORTH AFRICA REGION ECONOMIC UPDATE OCTOBER 2023

**BALANCING ACT:
JOBS AND WAGES IN THE MIDDLE EAST AND NORTH AFRICA WHEN CRISES HIT**