

## 2. Reversing the Trend: Enhancing Medium-Term Growth Prospects<sup>1</sup>

*Medium-term growth prospects for countries in the Middle East and North Africa (MENA)<sup>2</sup> and Caucasus and Central Asia (CCA) regions have been gradually deteriorating over the past 15 years, and realized growth has repeatedly fallen short of expectations. Although living standards have improved, they have stagnated relative to advanced economies and fallen behind trends seen among emerging markets and developing economies elsewhere. Growth decompositions reveal that increases in employment per capita has been a key contributor to per capita output growth across the MENA and CCA regions, but its role has diminished over time. By contrast, growth in other regions has largely relied on contributions from capital deepening and Total Factor Productivity (TFP). Policy action is needed to resume income convergence and foster stronger and more sustainable growth. Changing demographics will require policies designed to enhance participation and job creation, including for women and youth, especially in the MENA region. Increasing relatively low levels of capital per worker could also yield significant growth dividends and would require deepening financial development and reforms to promote private sector investment. Meanwhile, policies to boost TFP will need to be tailored to country-specific needs. On average, the most important policy actions include those that help support macroeconomic stability, increase levels of digitalization, enhance trade complexity, and reduce the state footprint. Such efforts are also critical in light of the adverse impacts of conflicts and climate-related disasters on TFP.*

### 2.1 Deteriorating Growth Prospects

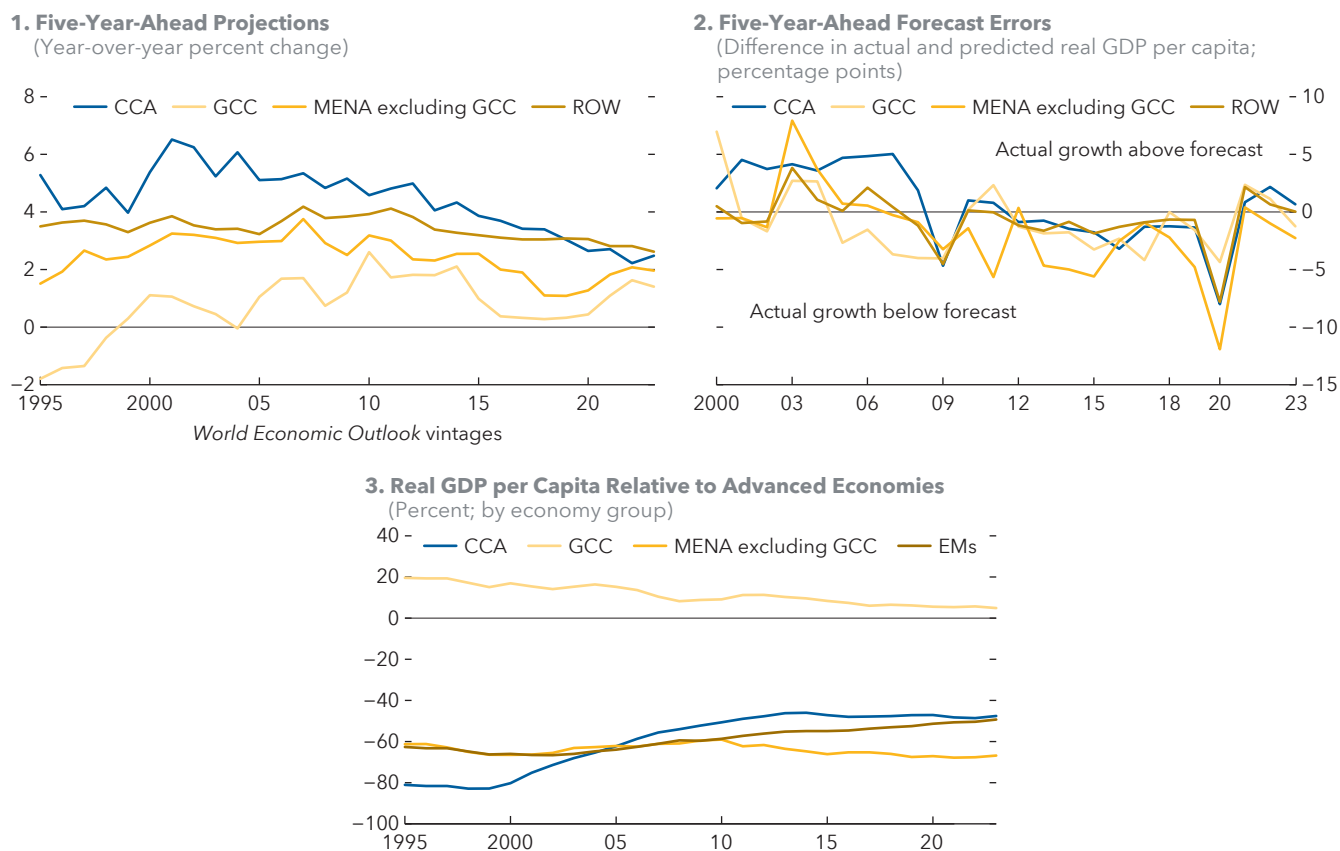
Recent trends indicate a concerning decline in growth prospects around the world, primarily because of a slowdown in TFP growth (April 2024 *World Economic Outlook*). Medium-term growth expectations for the MENA and CCA regions have also deteriorated over the past two decades (Figure 2.1, panel 1). This deterioration has been broad-based across countries, although GCC countries exhibit more volatility than elsewhere, mainly because of global oil price fluctuations. In addition to forecasts becoming progressively more pessimistic, actual economic growth has consistently fallen short of expectations, particularly since the global financial crisis (Figure 2.1, panel 2).

Starting in the early 2000s and consistent with global trends, economies across the MENA and CCA regions generally experienced an upswing in growth, which lasted until the onset of the global financial crisis when a noticeable slowdown set in.<sup>3</sup> Even though living standards have continued to improve since then, the gap in income per capita between MENA and CCA economies on the one hand and advanced economies on the other has either remained static (CCA) or widened (MENA, excluding the GCC). Moreover, growth in income per capita has not kept pace with those in emerging market economies elsewhere (Figure 2.1, panel 3). For GCC economies, although income per capita levels have generally been above those of the average advanced economy, relative average income per capita in the GCC has been gradually declining over time and is now close to that of advanced economies.

<sup>1</sup> This chapter was prepared by Faris Abdurrachman, Nordine Abidi, Razan Al Humaidi, Vizhdan Boranova, Bronwen J. Brown, Steven Dang, Yuan Monica Gao Rollinson, Troy Matheson (co-lead), Borislava Mircheva (co-lead), and Nora Neuteboom.

<sup>2</sup> For analytical purposes, Middle East and North Africa (MENA) includes Pakistan in this chapter. In addition, the Gulf Cooperation Council (GCC) economies and MENA excluding the GCC are studied as separate country groupings.

<sup>3</sup> The global financial crisis had lasting scarring effects that significantly lowered medium-term growth by reducing investment in innovation and technology, restricting credit access for small and medium-sized enterprises, and causing a misallocation of resources, all of which hindered productivity gains (Fernald 2015; IMF 2015). In addition, the crisis led to a deterioration in human capital amid prolonged unemployment, further exacerbating the decline in total factor productivity (TFP) (Ball 2014)

**Figure 2.1. Real GDP per Capita Growth Projections, Forecast Errors, and Income Convergence**

Sources: IMF, World Economic Outlook database; and IMF staff calculations.

Note: Panel 1 illustrates five-year-ahead growth projections published in fall vintages of the *World Economic Outlook* from 1995 to 2023.

Panel 2 shows the difference between realized growth of a given year (between 2000 and 2023) and projected growth in the *World Economic Outlook* published five years earlier. Countries are weighted using purchasing power in international dollar weights. EMs and the rest of the world exclude CCA and MENA countries (and Pakistan). CCA = Caucasus and Central Asia; EMs = emerging markets; GCC = Gulf Cooperation Council; MENA = Middle East and North Africa (including Pakistan); ROW = rest of the world.

## 2.2 Main Contributors to Growth Differ from the Rest of the World

A growth accounting approach helps to unpack the growth experience. This approach reveals that employment per capita has been a key contributor to growth of GDP per capita across the MENA and CCA regions, but its role has diminished over time and unemployment rates have remained persistently high.<sup>4</sup> In contrast, growth in other regions has largely relied on contributions from capital deepening and TFP (Figure 2.2, panel 1).<sup>5</sup> That said, the relative importance of growth in employment, capital, and TFP has varied over time and country groups.

- **Employment.** Unlike in the rest of the world, employment per capita has been a larger contributor to growth than capital deepening across the MENA and CCA regions on average. However, outside GCC economies, its contribution has dropped markedly since the global financial crisis. In MENA excluding the GCC, employment's

<sup>4</sup> Many countries in the MENA and Caucasus and Central Asia (CCA) regions have a long history of high unemployment rates and relatively low labor force participation rates. In this context, it is important to note that growth in employment per capita can still occur even if unemployment and participation rates are unchanged, provided the working-age population grows more rapidly than the overall population (see Online Annex 2).

<sup>5</sup> The analysis assumes a simple, constant coefficient Cobb–Douglas production function for each group of economies. It breaks down real per capita output growth into three main components: capital deepening (growth in capital per employed worker), growth in employment per capita, and growth in TFP. In this model, growth in real output per capita equals the capital compensation share multiplied by capital deepening plus growth in employment per capita plus growth in TFP.

**Figure 2.2. Contributions to Real GDP per Capita Growth, 1995-2023**  
(Percent)



Sources: International Labour Organization; Penn World Table version 10.01; United Nations, World Population Prospects; and IMF staff calculations.

Note: Countries are weighted using purchasing power in international dollar weights. Contribution figures were obtained through a growth decomposition exercise of real GDP per capita assuming a standard Cobb–Douglas production function. Labor productivity is real GDP per employed worker. Contributions of capital deepening and employment per capita reflect the shares of the respective factor inputs in output and their growth rates. Per capita growth decomposition sample for the world comprises 140 economies. CCA includes data for Armenia, Kazakhstan, and the Kyrgyz Republic; GCC includes data for Bahrain, Kuwait, Oman, Saudi Arabia, and the United Arab Emirates; MENA includes data for Algeria, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Jordan, Kuwait, Mauritania, Morocco, Oman, Pakistan, Saudi Arabia, Tunisia, the United Arab Emirates, and Yemen. CCA = Caucasus and Central Asia; GCC = Gulf Cooperation Council; MENA = Middle East and North Africa (including Pakistan); TFP = total factor productivity.

contribution to growth dropped from about 2.2 percentage points during 2001-07 to 0.5 percentage point in the years after the global financial crisis (2008-19) (Figure 2.2, panel 2). The CCA region observed a similar trend, with employment’s contribution to growth declining from 2 percentage points during 2001-07 to almost zero in the later period (Figure 2.2, panel 4).

- *Capital.* There was a notable pickup in contributions from capital deepening observed from 2008 to 2019, surpassing the contribution of employment and similarly to trends elsewhere (Figure 2.2, panels 2 and 4). This likely reflects the prolonged period of low global interest rates following the global financial crisis and continuing during the COVID-19 pandemic. Nonetheless, capital’s contribution to growth has been smaller in the MENA and CCA regions compared with the rest of the world on average (Figure 2.2, panel 1).
- *TFP.* TFP’s contribution to growth exhibits more heterogeneity across time and economy groups.
  - In MENA excluding the GCC, TFP’s contribution was small from 1995 to 2007 (about 0.8 percentage point) and in the years following the global financial crisis up until before the COVID-19 pandemic (Figure 2.2, panel 2). Subsequently, TFP significantly contributed to growth during 2020–23, but primarily because of developments in the Islamic Republic of Iran (Figure 2.2, panel 2).<sup>6</sup>
  - In GCC economies, TFP’s contributions have been notably large and negative (Figure 2.2, panel 3). In addition to the need for structural reforms, this is possibly related to developments in the hydrocarbon sector, where periods of lower oil prices or voluntary production cuts led to declining output with little or no impact on production capacity.<sup>7</sup>
  - In the CCA region, TFP’s contribution to growth declined as the economic benefits from structural reforms following independence in the early 1990s began to wane. Notably, contributions decreased from 7.5 percent over 2001–07 to about 1.5 percent during 2008–19. Moreover, the contribution of TFP to growth was negligible from the onset of the COVID-19 pandemic until 2023.

These factors are discussed in more detail in sections 2.3 through 2.5.

## 2.3 Fading Employment Contributions to Growth

The decline in the contribution of employment to growth in GDP per capita in many economies largely reflects a slowdown in the growth of working-age population shares, which have not been fully offset by increases in labor force participation and the employed share of the labor force.<sup>8</sup> Notably, in line with global trends, growth in the size of the working-age population relative to the total population has typically slowed, albeit to varying degrees (Figure 2.3). In MENA (excluding the GCC), the employed share of the labor force has risen in recent years. However, these improvements have been insufficient to counteract declines in the growth of the working-age population share, resulting in an overall decline in employment per capita’s contribution to growth over time. In contrast, GCC countries have seen strong gains in labor force participation, whereas the working-age population share’s contribution has remained broadly stable, leading to a rise in employment per capita’s contribution to growth.<sup>9</sup> By contrast, across CCA economies, labor force participation rates have dropped significantly.

### Potential Growth Gains if Gaps Are Closed

In GCC and CCA economies, progress has been made in increasing female labor force participation and reducing youth unemployment. Yet, significant challenges remain in MENA countries outside the GCC. Although participation by women in the labor force has increased in recent decades (with the CCA being an exception, given the already high participation of women in the labor force), the rates of nonparticipation by women in MENA (excluding the GCC) remain above the average for the rest of the world (Figure 2.4, panel 1). Moreover, this is associated with

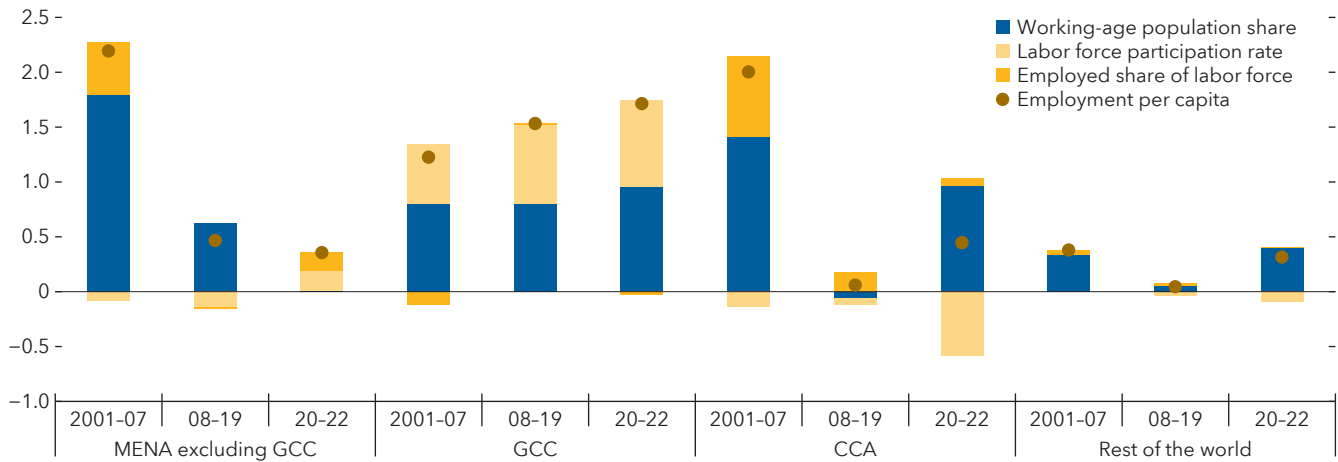
<sup>6</sup> For MENA (excluding the GCC), the observed increase in TFP growth over 2020–23 is primarily driven by the Islamic Republic of Iran, where data is highly volatile because of the impact of external sanctions.

<sup>7</sup> Employment and capital stock data are not available separately for the hydrocarbon and nonhydrocarbon sectors of the economy to undertake a more detailed assessment of their relative roles.

<sup>8</sup> The working-age population is defined as the size of population between the ages of 15 and 64 years.

<sup>9</sup> Although not studied in this chapter, it is important to recognize that foreign workers are key to the workforce in the GCC.

**Figure 2.3. Employment per Capita: Contributions to Growth, 2001-22**  
(Year-over-year percent change; contributions in percentage points)



Sources: International Labour Organization; United Nations, World Population Prospects; and IMF staff calculations.

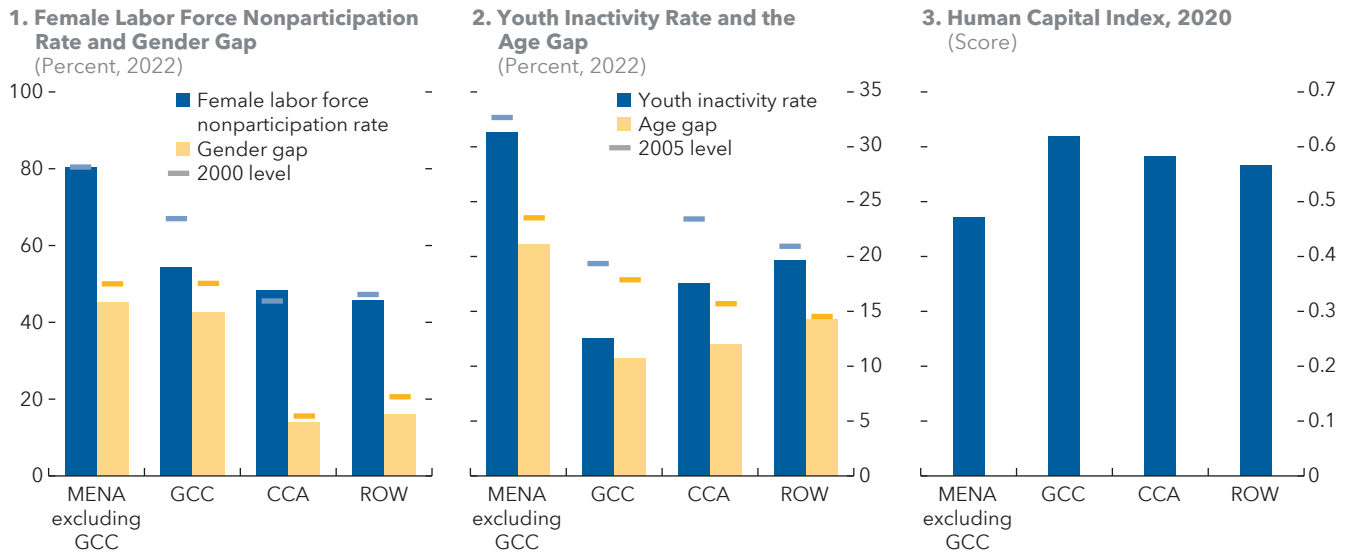
Note: The employed share of labor force is defined as 100 percent minus the unemployment rate. Countries weighted using purchasing power in international dollars. CCA = Caucasus and Central Asia; GCC = Gulf Cooperation Council; MENA = Middle East and North Africa (including Pakistan).

a sizable participation gender gap in the workforce in these countries compared to other regions. Among GCC economies, even though the rate of nonparticipation by women has shrunk over the past two decades as economies have actively implemented reforms to diversify their economies, it remains above levels seen elsewhere.<sup>10</sup>

Youth inactivity is another dimension that holds significant opportunities for improvement in the MENA region. Excluding the GCC countries (where the youth inactivity rate is slightly above 10 percent), over 30 percent of young people in the MENA region are neither working nor engaged in education or training, well above the average in the rest of the world of under 20 percent (Figure 2.4, panel 2). Several factors drive these high youth inactivity rates, including a mismatch between education systems and labor market needs, rigid labor markets with strong protection for existing workers and few incentives to hire young workers, and economic structures with wealth concentrated in specific sectors (such as commodities) that do not create broad-based employment opportunities (ILO 2015). Although youth inactivity rates have fallen over time and the gaps with adults (the age gaps) have narrowed, these gaps remain notably large in MENA countries outside the GCC, where overall unemployment rates are also high.

Increasing female labor force participation and youth employment to levels seen in the rest of the world could lead to significant gains in employment and economic output. Based on a growth decomposition from a Cobb–Douglas production function and assuming all other factors of production remain unchanged, a 1-percentage-point increase in female labor force participation rates could yield about 1 percentage point higher output per capita on average in MENA (excluding the GCC) and about 0.4 percentage point higher in the GCC. Similarly, output per capita in MENA (excluding the GCC) would be about 0.2 percentage point higher for every 1 percentage point reduction in youth unemployment rates toward average levels seen in other parts of the world (see Online Annex 2).

<sup>10</sup> See Bahrain Economic Vision 2030, Kuwait Vision 2035, Oman Vision 2040, Qatar National Vision 2030, Saudi Vision 2030, and UAE Vision 2031.

**Figure 2.4. Labor Market: Selected Demographic Indicators**

Sources: International Labour Organization; World Bank, World Development Indicators; and IMF staff calculations.

Note: The gender gap is the difference in male and female labor force nonparticipation rates. The youth inactivity rate is defined as the share of the population aged 15–24 years not in employment, education, or training. The age gap is the difference between the youth inactivity rate and the unemployment rate for adults over 25 years. The Human Capital Index is an international metric that benchmarks key components of human capital, including health and education, across countries. The index measures the level of human capital that a child could expect to attain by the age of 18. The index ranges between 0 and 1, with 1 meaning the maximum possible level is reached. CCA = Caucasus and Central Asia; GCC = Gulf Cooperation Council; MENA = Middle East and North Africa (including Pakistan); ROW = rest of the world.

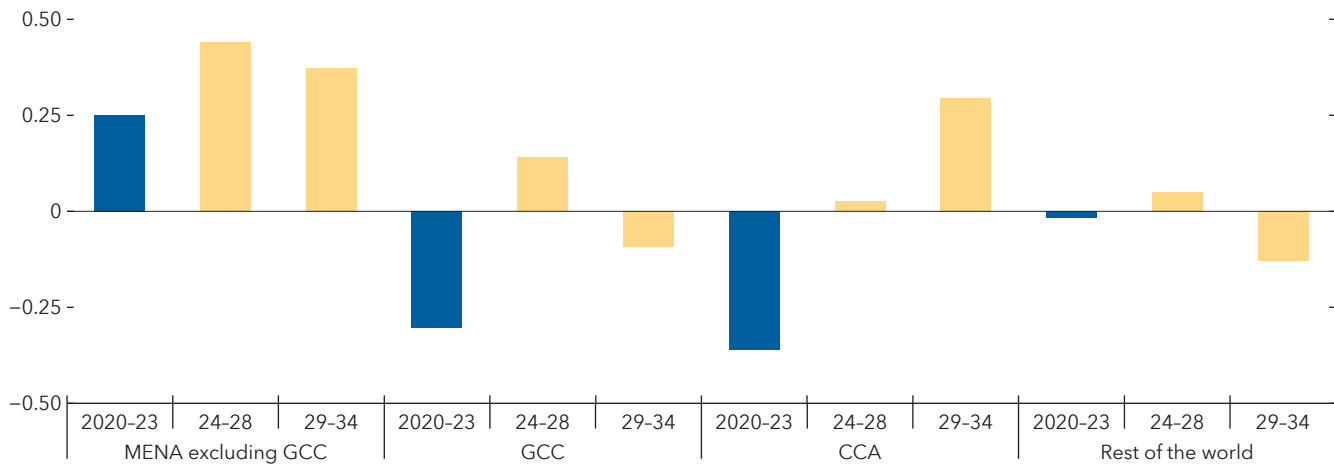
Some economies also lag global averages in terms of human capital. On a positive note, in the CCA and GCC regions, human capital development, which helps boost worker employability and adaptability, has surpassed the global average. However, the MENA region (excluding the GCC) continues to lag the average in the rest of the world, underscoring the importance of prioritizing investment in human capital (Figure 2.4, panel 3).<sup>11</sup>

## Making the Most of Demographic Changes

Looking forward, demographic shifts are poised to reshape workforce dynamics and influence the drivers of employment growth. The United Nations predicts that, over the next five years, economies in the MENA and CCA regions will benefit from a faster increase in the share of working-age people in their total populations, also when compared to the rest of the world (Figure 2.5). To fully reap the benefits of these demographic shifts, labor markets will need to become more flexible and capable of generating sufficient jobs to absorb the influx of new workers (by improving labor force participation rates and the share of those employed). Further ahead, especially in the latter half of the decade, as demographic conditions in MENA economies become less favorable, especially in the GCC, it will become even more important to increase labor force participation and reduce unemployment rates, particularly for women and the youth, to sustain growth in employment per capita.

<sup>11</sup> The gap in human capital is evident across various dimensions, including educational attainment, skill levels, and health outcomes. For example, according to UN Educational, Scientific and Cultural Organization, the secondary school enrollment rate in the MENA region was about 75 percent in 2020, below the global average of 84 percent.

**Figure 2.5. Working-Age Population Shares: Actual and Projected Growth, 2020-34**  
(Average year-over-year percent change)



Sources: United Nations, World Population Prospects; and IMF staff calculations.

Note: Figures for the period 2020-23 are based on official statistics from national statistical offices (blue bars); figures for the periods 2024-28 and 2029-34 (yellow bars) are based on population projections provided by the United Nations. Countries are weighted by population. CCA = Caucasus and Central Asia; GCC = Gulf Cooperation Council; MENA = Middle East and North Africa (including Pakistan).

## 2.4 Subdued Capital Deepening

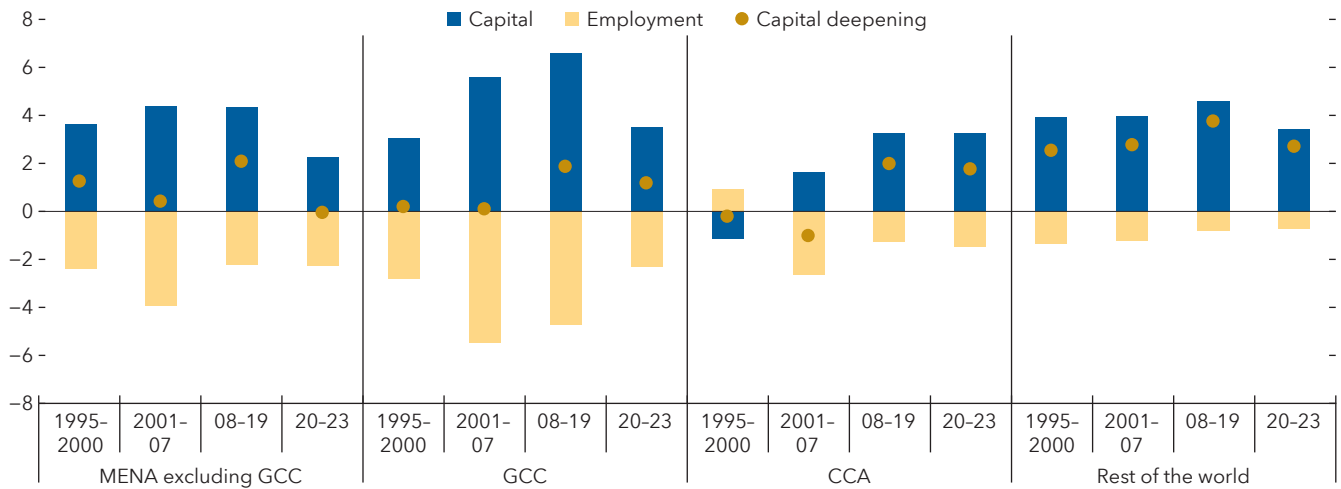
The less significant contribution of capital deepening to growth in the MENA and CCA regions relative to the rest of the world could be partly because of the sizable role that governments play in most financial sectors, crowding out private sector investment (see Chapter 3). Although the average rates of investment and capital accumulation have generally kept pace with global trends (except in the CCA), relatively strong employment growth rates (despite high unemployment rates) have led to disappointing growth in capital-labor ratios, thus limiting their contributions to labor productivity (Figure 2.6).

### Significant Potential Growth Dividends

A higher level of capital per worker can boost labor productivity (output per worker). In this respect, a higher capital-labor ratio is associated with higher real GDP per capita. Moreover, a 1 percent increase in capital per worker is associated with roughly a two-thirds increase in output per capita on average in the MENA and CCA regions, with countries that have relatively capital-intensive economies, such as hydrocarbon producers in the GCC and Kazakhstan, seeing larger gains in output (Figure 2.7).

Economies in the MENA and CCA regions would need to achieve an annual increase of about 2 percent in capital deepening to close the gap in capital deepening observed since 1995 with the rest of the world. Assuming that all other factors of production remain unchanged, achieving this could yield an estimated annual increase in GDP per capita of more than 1.3 percentage points. However, the expected benefits vary by region, with GCC countries potentially seeing a 1.5-percentage-point increase, MENA countries (excluding the GCC) a 1.3-percentage-point increase, and CCA countries a 1.4-percentage-point increase (see Online Annex 2). To close this gap, reforms that promote private investment and diversification are essential, including measures to improve financial market functioning (see Chapter 3 for a more detailed analysis of the role of financial market deepening in the MENA and CCA regions).

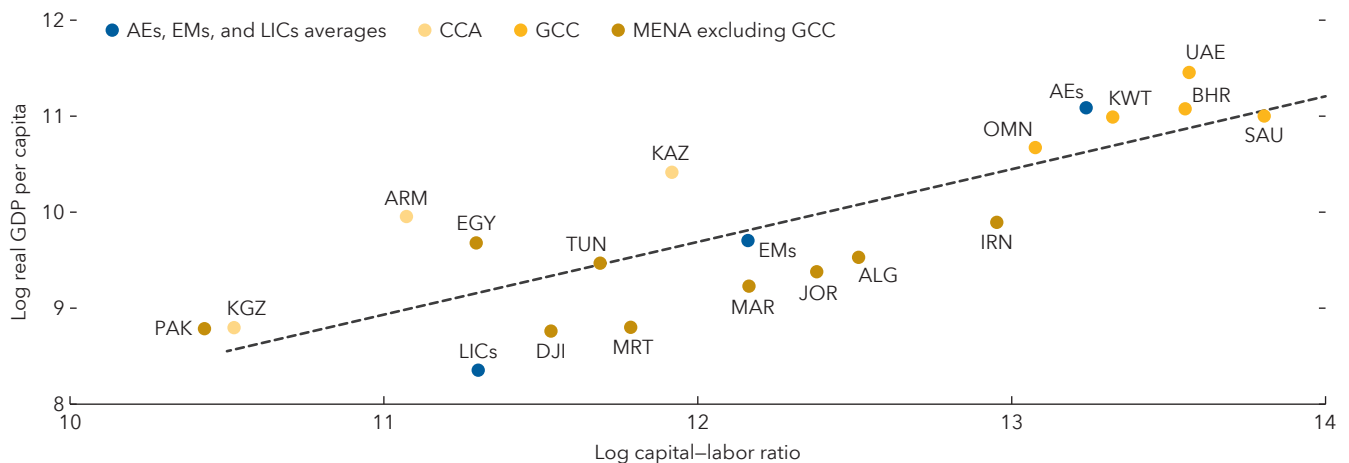
**Figure 2.6. Contributions to Capital Deepening, 1995-2023**  
(Average year-over-year percent change; contributions in percentage points)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

Note: Countries weighted using purchasing power in international dollar weights. Figures obtained through a decomposition exercise of capital deepening, where capital deepening is defined as the amount of capital utilized per employed worker. CCA = Caucasus and Central Asia; GCC = Gulf Cooperation Council; MENA = Middle East and North Africa (including Pakistan).

**Figure 2.7. Capital-Labor Ratio and Real GDP per Capita, 2023**  
(Natural logs)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

Note: Countries are weighted using purchasing power in international dollar weights. Data labels in the figure use International Organization for Standardization (ISO) country codes. AEs = advanced economies; CCA = Caucasus and Central Asia; EMs = emerging markets; GCC = Gulf Cooperation Council; LICs = low-income countries; MENA = Middle East and North Africa (including Pakistan).



## 2.5 Lackluster Total Factor Productivity Growth

As shown, weak TFP growth is a significant concern for many economies in the MENA and CCA regions. This section explores key factors that have been particularly relevant for TFP growth in these regions.<sup>12</sup> The historical analysis spans 2000–23 and includes 18 economies from the MENA and CCA regions (reflecting data availability).

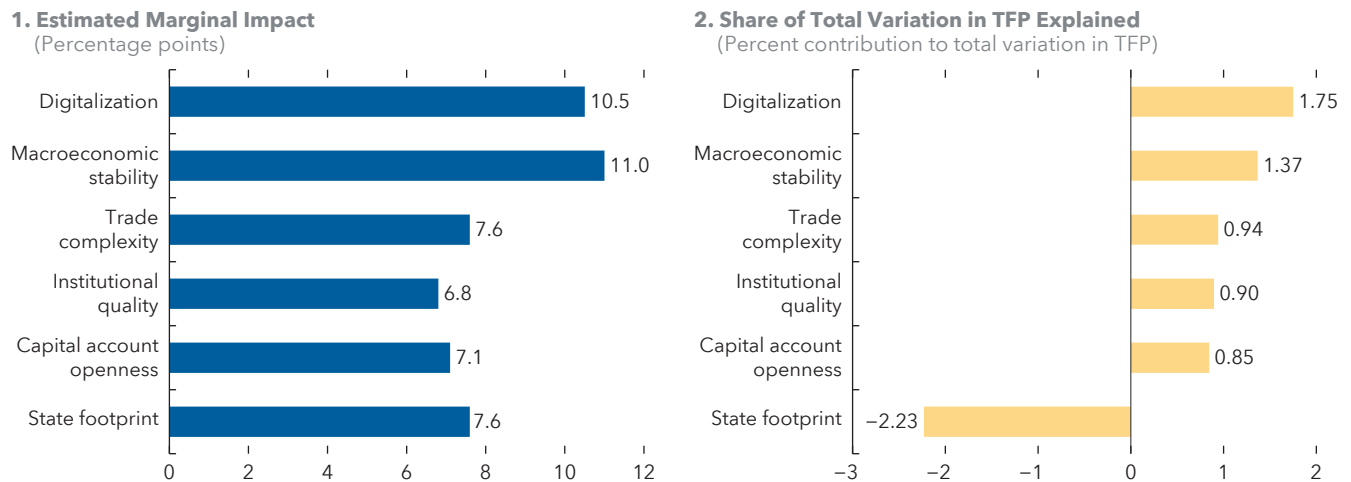
The following factors are identified as structural drivers of TFP growth:

- *Macroeconomic stability.* This factor is captured in the analysis by the standard deviations in inflation and real GDP growth from their long-term averages (Fischer 1993; Barro 1995; Ramey and Ramey 1995).
- *Trade complexity.* Trade complexity is measured by the diversity and sophistication of exports (Grossman and Helpman 1991; Hausmann, Hwang, and Rodrik 2007).
- *Capital account openness.* The analysis uses the ratio of net FDI inflows to GDP to measure capital account openness. The measure evaluates the extent to which a country allows or attracts cross-border capital flows (Borensztein, De Gregorio, and Lee 1998; IMF 2018).
- *Digitalization.* Digitalization is measured using fixed broadband subscriptions and the ratio of high-technology exports to total manufactured exports. These indicators measure the extent of digital infrastructure and access (Brynjolfsson and Hitt 2000; Abidi, El Herradi, and Sakha 2022; Dabla-Norris and others 2023).
- *Labor and inclusion.* This factor is measured using the female labor force participation rate, which captures labor quantity and market reforms aimed at promoting inclusiveness (McGuckin and van Ark 2005; Klasen and Lamanna 2009).
- *Institutional quality.* This measure captures the quality of institutions and regulatory frameworks, reflecting governance and the rule of law (Hall and Jones 1999; Acemoglu, Johnson, and Robinson 2004; Acemoglu and Robinson 2015).
- *Financial integration.* This driver is measured by a financial market and institutions index, credits to the private sector, market capitalization, and rating of credit market regulations. It evaluates the development of financial markets and institutions (Levine 2005; Lane and Milesi-Ferretti 2017).
- *State footprint.* The analysis uses several indicators to measure state footprint, including a government effectiveness index, share of banking assets held by state-owned enterprises, government consumption, rating of property rights protection, and rating of fiscal transfers. This driver measures the extent and effectiveness of government intervention (Barro 1991; Ghali 1999; Dar and Khalkhali 2002; Loko and Diouf 2009).

In the analysis, improvements to digitalization, macroeconomic stability, and trade complexity, and reductions to the state footprint stand out as strongly associated historically with higher TFP growth for MENA and CCA economies. Digitalization appears to have the strongest positive effect on TFP growth (Figure 2.8, panel 1). On average, countries with relatively high levels of digitalization experience TFP growth that is about 1.8 percentage points higher than those with lower levels. Yet, other factors are also important. Improved macroeconomic stability is associated with about 1.4 percentage points higher TFP growth. Moreover, countries that moved from low to high levels of trade complexity typically saw an increase in TFP growth of about 0.9 percentage point. In contrast, a larger state footprint was found to negatively impact TFP growth by more than 2 percentage points.<sup>13</sup>

<sup>12</sup> Variables underlying the factors (which are the first principal components of the related variables in a category) were selected based on data availability and their statistical distribution and correlation with TFP growth, helping to ensure their relevance and robustness. Each factor is then transformed into a high/low indicator (above or below the sample median). In the regression analysis, the estimated effect of a factor represents the TFP growth impact of moving from the low to the high group. See the Online Annex 2 for further details. While other categories, such as human capital quality and trade openness, are often cited in the literature, they are not the focus of this analysis.

<sup>13</sup> Although our analysis indicates a negative impact for the MENA and CCA regions, some studies suggest that a larger state footprint could positively affect productivity growth by fostering legal institutions, infrastructure, and market corrections (Ghali 1999). In contrast, other regional empirical evidence suggest that a larger government is not conducive to higher productivity growth or better economic performance (Loko and Diouf 2009; see also Barro (1991) and Dar and Khalkhali (2002)). Therefore, the results should be interpreted with caution as they depend on public sector efficiency, which could vary significantly by sample and subregion.

**Figure 2.8. Drivers of TFP Growth, 2000-23**

Source: IMF staff calculations.

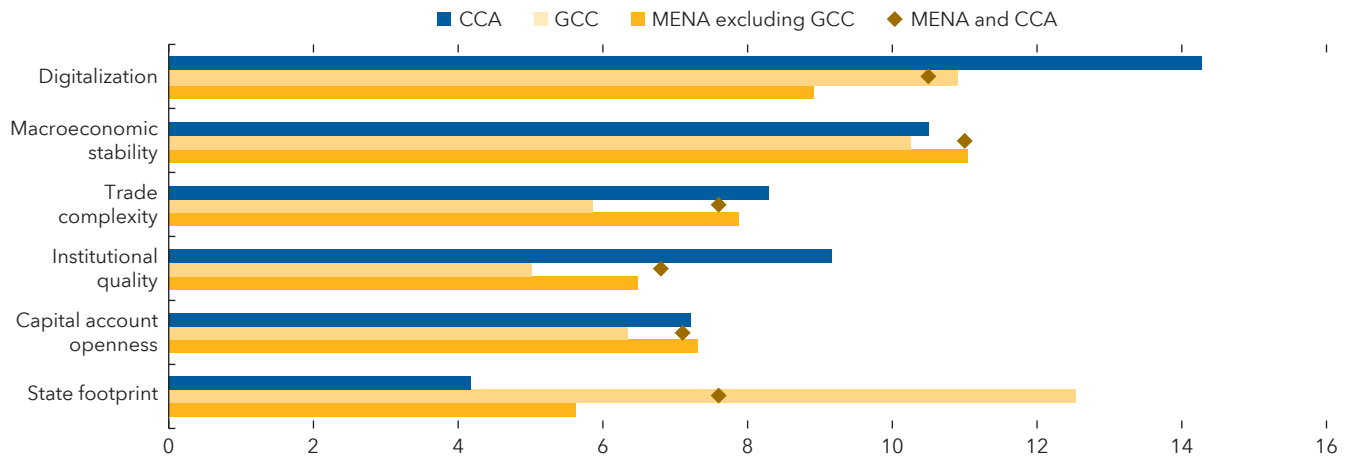
Note: The bars in panel 1 represent the estimated beta coefficients of the drivers ( $\beta_i$ ). All estimates are significant at the 10 percent level. The bars in panel 2 show the contribution of each explanatory variable in percentage terms (following the methodology of Sterck (2019) based on data dispersion measured by mean absolute deviation). The contributions of the six key drivers listed do not add up to 100 percent in the chart, as contributions from insignificant explanatory variables (labor and inclusion; financial integration) and the residual term are not shown for brevity. See the Online Annex 2 for full results. TFP = total factor productivity.

Accounting also for the size of the variation in the underlying factors over the sample suggests that changes to macroeconomic stability and digitalization were, on average, the largest overall contributors to the variability of TFP growth. Notably, the average absolute deviation of macroeconomic stability is more than twice that of the state footprint for the MENA and CCA regions. As a result, macroeconomic stability accounts for a greater proportion of the total variation in realized TFP growth, despite its smaller estimated marginal effect. A similar finding applies to digitalization. In fact, each factor accounts for roughly 11 percent of the total variation in TFP growth. Moreover, the positive effects of improved trade complexity and the negative impact from an increase in the state footprint are also notable, with each contributing nearly 8 percent to the total variation in TFP growth observed in the estimation sample (Figure 2.8, panel 2).

However, the key factors contributing to variations in TFP growth have varied markedly across the MENA and the CCA regions, although macroeconomic stability and digitalization stand out as significant factors for both. For the MENA region (excluding the GCC), macroeconomic stability and digitalization contributed 11 and 9 percent, respectively, to the variation in TFP growth. At the same time, the contribution of changes to the state footprint was less than 6 percent. In contrast, for the GCC, the importance of the state footprint and digitalization stood out, contributing 13 and 11 percent, respectively.<sup>14</sup> In the CCA region, digitalization contributed about 14 percent to the variation of TFP growth, and macroeconomic stability contributed about 11 percent, with the importance of changes to the state footprint somewhat smaller, contributing about 4 percent (Figure 2.9). These findings underscore the critical role of digitalization and macroeconomic stability in explaining the variation in TFP growth across these regions, while also highlighting the significant impact of the state footprint on TFP growth variability.

<sup>14</sup> The large contribution of the state footprint is driven by heterogeneity across GCC economies.

**Figure 2.9. Total Factor Productivity: Share of Total Variation in TFP Growth Explained by Region, 2000-23**  
(Percent contribution to total variation in TFP growth)



Source: IMF staff calculations.

Note: The bars represent the relative contributions of the drivers to the mean absolute variation of TFP growth within each subregion, following the methodology of Sterck (2019). The contributions of the six key drivers listed do not add up to 100 percent in the chart, as contributions from insignificant explanatory variables (labor and inclusion; financial integration) and the residual term are not shown for brevity. See Online Annex 2 for full results. CCA = Caucasus and Central Asia; GCC = Gulf Cooperation Council; MENA = Middle East and North Africa (including Pakistan).

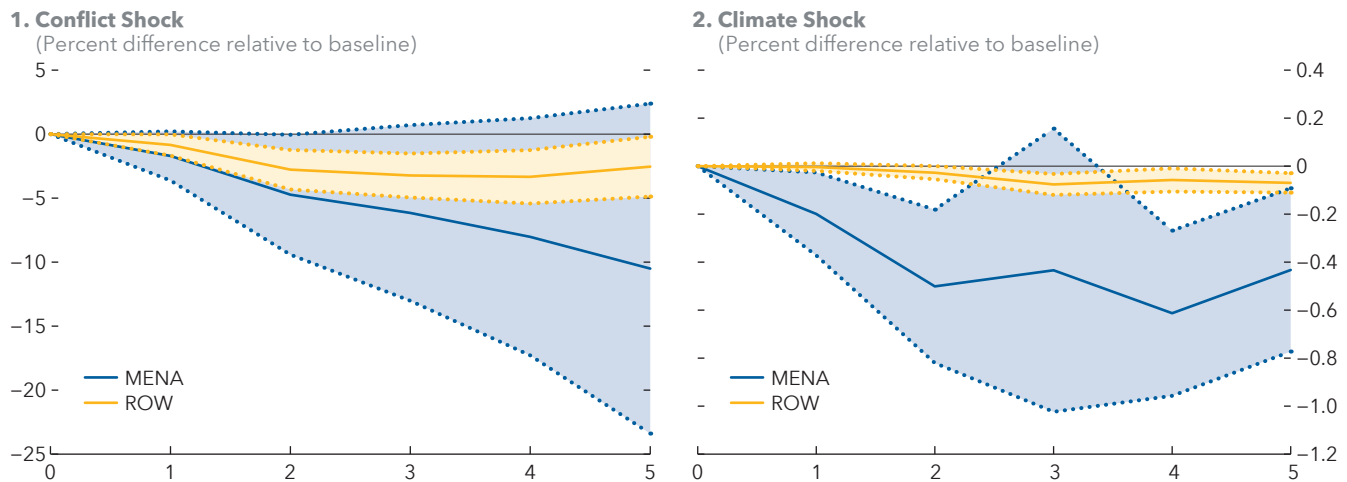
## 2.6 Adverse Shocks Dampen Total Factor Productivity Growth

Beyond the structural factors that have influenced TFP growth, the MENA and CCA regions have also been more affected by frequent adverse shocks stemming from conflict and climate change. Since the early 1990s, MENA and CCA economies have seen a greater incidence of high-intensity violent conflicts than elsewhere, with profound and enduring impacts on economic output (Chapter 2 of the April 2024 *Regional Economic Outlook: Middle East and Central Asia*). Moreover, these regions have also suffered from numerous severe climate-related disasters (such as heat waves, droughts, and floods), as the negative economic effects from climate change are becoming more evident (Chapter 1; Acevedo and others 2020).

An analysis using local linear projections demonstrates that conflicts have large and long-lasting negative impacts on productivity for the average economy in the MENA region, with the level of TFP nearly 10 percent lower for five years after a severe conflict shock (Figure 2.10, panel 1).<sup>15</sup> This evidence suggests that the negative and long-lived effects of high-intensity conflicts on economic output may be largely attributable to their cumulative negative impact on TFP. Similarly, the material damages arising from extreme climate events have, on average, been associated with persistently worse productivity outcomes for the average economy in the MENA region, with the level of TFP about 0.5 percent lower five years after a climate shock that caused damages of about 1 percent of GDP (Figure 2.10, panel 2).<sup>16</sup> These findings point to the profound economic challenges for the MENA region posed by conflicts and climate change.

<sup>15</sup> Owing to data coverage limitations, the empirical analysis of climate and conflict shock impacts on TFP does not include CCA economies.

<sup>16</sup> Material damages are defined as the US dollar amount as a share of nominal GDP and comprise damages from climate-related disasters as defined by the EM-DAT database

**Figure 2.10. Total Factor Productivity: Impacts of Conflict and Climate Shocks**

Source: IMF staff calculations.

Note: Dynamic responses estimated using local linear projections. Bands show the 90 percent confidence interval around the point estimates. The shocks occur in year 1. The conflict shock is equivalent to the occurrence of a severe conflict in the country (at the 75th percentile of the world distribution of conflict intensities). The climate shock is equivalent to 1 percent of GDP loss because of material damages arising from extreme climate events. MENA = Middle East and North Africa (including Pakistan); ROW = rest of the world.

## 2.7 Fostering Stronger and More Sustainable Growth

Similar to global trends, growth expectations and outturns for countries in the MENA and CCA regions have been declining over the recent decades. Moreover, while changes to demographic factors have been relatively more favorable than in the rest of the world, capital accumulation has been subdued, while contributions from TFP have varied markedly. To change the trend and lift economic growth, policymakers in the MENA and CCA regions should aim to leverage changing demographics to support job creation, raise the level of capital per worker, and undertake reforms to boost TFP growth. That said, the appropriate mix of policies would require careful calibration to country-specific circumstances amid differences in the factors that most constrain growth.

Given the gaps identified in this chapter, policies to boost employment and labor productivity are likely to be key and should target multiple dimensions:

- *Improving female employment.* Female labor force participation rates can be increased by enhancing the quality of education and training programs for women, ensuring access to childcare, and creating supportive institutions (Olivetti and Petrongolo 2017). Importantly, these will need to be complemented with measures to level the playing field, such as policies aimed to improve job opportunities for women (Klasen and Lamanna 2009), including incentives to hire and retain female workers, encourage part-time work (Goldin 2014), and active labor market measures targeting women. Additional policies could include tax incentives and subsidies to businesses that hire and retain female employees, especially in sectors where women are under-represented, and implementing training and apprenticeship programs in collaboration with industries can help match women's skills with market demands (Gomes and Rijal 2024).
- *Increasing youth engagement.* Enhancing education and skill development to align more closely with the needs of the labor market is essential to get more young people into the workforce (Hanushek and Woessmann 2020). This could include partnerships with the private sector and on-the-job training. Improving access to finance for young entrepreneurs and supporting business incubators and accelerators that focus on entrepreneurship could also increase youth engagement (Beck and Demircuc-Kunt 2006; World Bank 2021).

- *Investing in education.* Policy should focus on improving educational outcomes, particularly in the fields of science, technology, and engineering and mathematics, while ensuring that skills taught match the future demands of the labor market (Hanushek and Woessmann 2015). Vocational training would also be key to better match skills to job requirements.

In addition, raising the ratio of capital to labor to at least the levels seen elsewhere will be needed to strengthen and sustain growth. This will require implementing reforms designed to reduce the role of the state in financial sectors and boost private investment. In this respect, enhancing the development of the financial sector would help expand access to finance and encourage investment by the private sector (see Chapter 3).

Lifting TFP growth can also play a key role. The historical analysis suggests that policies across multiple dimensions have helped lift TFP growth in the region, with countries benefiting most from strengthening macroeconomic stability, improving digitalization, and reducing the state footprint.<sup>17</sup> These are likely to remain key drivers of TFP growth. However, it is important to note that other factors that were not explored in the analysis could also boost TFP growth. Some of these, such as the adoption and automation of artificial intelligence, are without historical precedent. For example, artificial intelligence is expanding the set of tasks that can be automated, thereby raising labor productivity. Although the productivity gains from artificial intelligence have not been studied extensively, their potential for future gains could be considerable (OECD 2022). Furthermore, despite the well-established benefits of research and development in fostering innovation, the MENA and CCA regions lag in such activities, with research and development expenditure as a share of GDP below 2 percent on average, compared to about 3 percent in advanced economies. This indicates that there are likely opportunities for increasing research and development, which could in turn boost TFP.

Finally, analysis points to large negative impacts on TFP growth in the MENA region from conflict and climate shocks—both highly relevant challenges. Policies that strengthen macroeconomic fundamentals are vital for limiting the economic impacts of conflict, while climate change preparedness can be enhanced through adaptation and mitigation efforts (see Chapter 1).

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<sup>17</sup> Chapter 3 of the October 2023 *Regional Economic Outlook: Middle East and Central Asia*, Budina and others (2023), and Gigineishvili and others (2023) also show that structural reforms are important to boost growth

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