

## CHAPTER 4

# FALLING GRADUATION PROSPECTS

Low-Income Countries  
in the 21st Century

## Executive Summary

***The rate at which low-income countries (LICs) are transitioning to middle-income status has slowed.***

In 2000, 63 emerging market and developing economies (EMDEs) were classified as low-income countries (LICs). They were home to more than 60 percent of the 1.8 billion people worldwide then living in extreme poverty. Since then, 39 of those countries have graduated to middle-income status. Yet amid deteriorating global and domestic conditions, the rate at which LICs are climbing the income ladder has slowed markedly (figure ES.A). Twenty-four countries that were LICs at the turn of the century remain so, with annual per capita incomes below \$1,145 in 2023. South Sudan and the Syrian Arab Republic have joined their ranks amid debilitating conflicts, raising the total to 26 LICs today. Across a wide spectrum of development indicators, today's LICs are worse off than LICs in 2000 that subsequently attained middle-income status. In 2024, these 26 countries—concentrated in Sub-Saharan Africa—comprised more than 40 percent of people living in extreme poverty globally. Making progress on eliminating extreme poverty therefore depends crucially on accelerating progress in LICs.

***On recent trends, all but six of today's LICs will remain low-income through 2050.***

The economic challenges confronting LICs have intensified in the last 15 years amid deadlier conflict and violence, climate shocks, debt crises, and anemic growth. In today's LICs as a whole, annual per capita growth has averaged less than 0.1 percent since 2010—signifying 15 lost years (figure ES.B). Traditional modes of structural transformation have also stalled, with labor productivity estimated to have declined outright. As a consequence of these trends, extreme poverty has ceased falling in LICs (figure ES.C). Moreover, at average 2010-2019 growth rates, only six LICs would be expected to graduate to middle-income by 2050 (figure ES.D). This would represent less than one-quarter of eligible countries, down sharply from the nearly two-thirds that advanced in the first quarter of this century.

***Generating growth accelerations can fast-track LIC graduation and yield large improvements in economic and development outcomes.***

With political stability and supportive policies, LICs can achieve transformative growth accelerations—sustained periods of substantially higher per capita growth, during which output becomes more investment- and trade-intensive. Since 1990, 26 growth accelerations have been achieved from low-income levels, during which real per capita GDP typically increased by close to 7 percent annually. These accelerations lasted nearly 16 years on average. Over the course of the acceleration, investment-to-GDP ratios tended to rise by about 8 percentage points, with the agricultural share of employment declining rapidly and trade openness increasing. LIC growth accelerations have tended to be preceded by domestic reforms that prioritized investment (in Ethiopia and Nepal, for example), and by structural reforms that improved the business environment (Kenya, Rwanda, Viet Nam). A baseline of political stability is essential, but even in countries previously riven by conflict, growth accelerations have sometimes taken root relatively soon after peace was achieved (Nepal, Rwanda). In some instances (Ethiopia, Rwanda), internationally coordinated debt relief also played an important role.

***Today's LICs will need to overcome formidable challenges.***

Today's LICs will need to overcome pressing challenges, some of which are particular to their generation. The post-pandemic period has seen conflict and violence in LICs escalate, with often devastating impacts. The location and economic structure of today's LICs, coupled with limited resources for adaptation, renders them especially vulnerable to climate change and related extreme weather. Droughts, for example, are more common in LICs than elsewhere, and tend to do greater economic harm because of large agricultural sectors in these countries. The distance of most LICs from large and wealthy markets represents a further headwind—half are landlocked by neighbors that also are at fairly low levels of develop-

ment. Meanwhile, LIC governments lack the fiscal space to undertake the much-needed investment push. Domestic impediments to growth are compounded by a less favorable external environment than was enjoyed by former LICs that achieved middle-income status in recent decades. Today’s environment involves increasing trade fragmentation, heightened geopolitical tensions, and slowing global potential growth.

*Yet, LICs also enjoy untapped potential that could catalyze stronger long-term growth.*

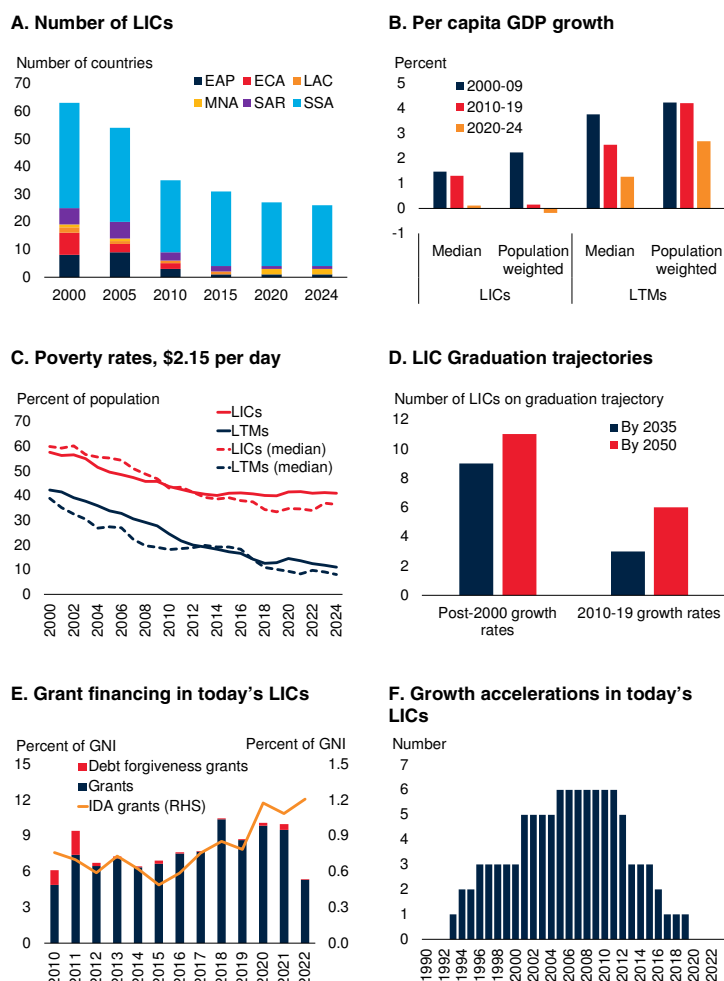
LICs have natural endowments which, properly harnessed, could drive higher living standards. LIC working-age cohorts are growing in absolute terms and as a proportion of population, in contrast to much of the rest of the world. As dependency ratios decline, investments in the health and education of these workforces could propel higher per capita incomes. At the same time, increased domestic savings could finance rapid investment growth. In some LICs, commodity wealth could generate resources to help smooth this process: LICs are home to at least half of known cobalt and graphite reserves—both critical renewable-energy inputs—as well as substantial endowments of other metals and energy commodities. In other LICs with tourism potential, improved political stability and infrastructure could unlock investment in the sector, offering employment and export growth. Most LICs also have favorable geography for low-cost solar energy, which could help to rapidly close energy coverage gaps. And, finally, with LICs concentrated in Sub-Saharan Africa, greater regional trade integration could reduce trade costs and deepen export potential.

*Well-designed national policy interventions can improve graduation prospects in LICs.*

Most LICs can improve growth prospects by prioritizing policy shifts shown to foster greater investment: prudent fiscal policies, deeper trade integration, and improved governance and monetary frameworks. Given the predominance of agriculture and services in LIC employment, a specific focus on raising productivity in promising areas of these sectors warrants attention.

### FIGURE ES Growth and graduation prospects in low-income countries (LICs)

The rate at which LICs are graduating to middle-income status has slowed markedly since 2010. Geographically, LICs are concentrated in Sub-Saharan Africa. Per capita GDP has near-flatlined for 15 years in LICs, while in LTMs it has decelerated more modestly. Progress on poverty reduction has also stalled in LICs. At 2010-19 average growth rates, less than a quarter of LICs would be on course to graduate to middle-income status by 2050. Recently, total grants to LICs have declined, even as International Development Association financing has increased. Transformative growth accelerations in today’s LICs were far more prevalent in the 2000s than today.



Sources: Gootjes et al. 2024; International Debt Statistics (database); Mahler and Lakner (2022); WDI (database); World Bank Poverty and Inequality Platform (database); World Bank.  
 Note: EAP = East Asia and the Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa. LICs = low-income countries; LTMs = LICs turned into middle-income countries.  
 A. LICs count includes the Democratic People’s Republic of Korea.  
 B. GDP aggregates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. GDP per capita population weighted aggregates are calculated as aggregated GDP divided by aggregate population. Median growth rates represent the median annual average growth rate for each country group in each period.  
 C. Solid lines represent population-weighted poverty rates in country groups. Dotted lines indicate the median poverty rate in each group each year.  
 D. Graduation trajectories assume that the threshold for middle-income status increases at the same pace as it has on average since 2000.  
 E. Grants are defined as legally binding commitments allocating funds for disbursement without any requirement for repayment. Data are on a disbursement basis and cover flows from all bilateral and multilateral donors. IDA grants are net disbursements of grants from IDA.  
 F. The number of accelerations depicted beyond 2016 may be low as any new accelerations will not yet be captured—a minimum of eight years of growth data is required to identify the start of an acceleration.

Economy-wide productivity can also be enhanced by addressing barriers to female labor-force participation and education. In addition, many LICs face binding constraints related to particular economic or civic contexts. For LICs facing debt distress, increased fiscal space will be a critical enabler of other reforms. For commodity-dependent LICs, improved natural-resource governance could reduce macroeconomic volatility while facilitating investment. Finally, for countries in conflict, establishing relative peace and stability should be a first-order priority, because it is a prerequisite for economic progress.

***Greater support from the international community is essential.***

Even with conducive policy reforms, LICs will need greater international assistance to get back on course on key development goals. By some estimates, LICs will require additional investment of 8 percent of GDP annually through 2030 to

meet existing development objectives, including climate goals. To come even close to these levels will require a significant pick-up in official development assistance, which declined in the years after the 2020 global recession (figure ES.E). In some LICs, financial relief from unsustainable debt burdens may yield the greatest results. In others, tailored support for climate adaptation could take priority. Meanwhile, well-calibrated technical assistance can support LICs to enhance domestic institutions and better utilize additional resources.

It is essential to recognize that the most promising period for LICs this century was the 2000s—a decade characterized by increased global integration, trade liberalization and international cooperation (figure ES.F). The embrace by other countries of a rules-based international trading system—and the constructive resolution of geopolitical tensions—could do much to improve prospects for growth and graduation in LICs.

## Falling Graduation Prospects: Low-Income Countries in the 21st Century

*Rapid growth underpinned by domestic reforms and a benign global environment allowed many low-income countries (LICs) to attain middle-income status in the first decade of the 21st century. Since then, the rate at which LICs are graduating to middle-income status has slowed markedly. The prospects for today's LICs appear much more challenging. In recent years, per capita growth has been anemic amid heightened levels of conflict and fragility and adverse global developments. Across a wide array of development metrics, today's LICs are behind where LICs that since turned middle-income stood in 2000. They are also more susceptible to domestic shocks, including those related to climate change. Many LICs that graduated in the past underwent growth accelerations—extended periods of robust economic expansion, during which output became far more trade- and investment-intensive. These accelerations were generally preceded by reforms that tended to increase market orientation and channeled resources into rapid investment growth. To kickstart stronger growth, today's LICs can harness large resource endowments, including to supply the green transition, and find advantage in youthful and growing populations, untapped tourism potential, and regional trade integration. However, harnessing these factors and improving productivity hinges on engineering increased investment in human and physical capital, closing gender gaps, addressing fiscal risks, and improving governance. For LICs in fragile and conflict situations, attaining greater peace and stability is paramount. LICs will also need international support to mobilize additional resources and foster institutions that can drive durable reforms. Throughout, policymakers should be guided by deep knowledge of country circumstances—there is no one-size fits all recipe for growth and graduation in LICs.*

### Introduction

At the turn of the 21<sup>st</sup> century, nearly 1.8 billion people lived in extreme poverty worldwide—more than 60 percent of them in 63 nations classified as low-income countries (LICs).<sup>1</sup> Since then, the number of extreme poor globally has declined by more than 60 percent, while 39 countries that were low income have achieved middle-income country status (figure 4.1A). Among these previous LICs are some of the largest emerging market and developing economies (EMDEs), including Bangladesh, India, and Indonesia. Countries that graduated to middle-income since 2000—referred to in this chapter as LICs turned into middle-income countries (LTMs)—were often among the richer LICs in 2000, but they have also grown at

solid pace, with substantial improvements in many wider development metrics.<sup>2</sup>

Yet, 24 countries that were low income at the turn of the century remain so today.<sup>3</sup> In addition, South Sudan and the Syrian Arab Republic have regressed from middle-income status during protracted conflicts, bringing the total of number of LICs to 26. These countries have annual GNI per capita of less than \$1,145 or a little more than \$3 per day.<sup>4</sup> In all, they currently account for less than 1 percent of global output, but about 9 percent of the global population (figure 4.1.B and

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*Note:* This chapter was prepared by Philip Kenworthy, Joseph Mawejje, and Rudi Steinbach.

<sup>1</sup>LICs in 2000 reflect the country classification of the 2001/02 World Bank fiscal year and are defined as countries with GNI per capita of \$755 or less in 2000 (World Bank Atlas method). The LIC threshold for the 2024/25 fiscal year is set at GNI per capita of \$1,145 or less in 2023. New thresholds are determined at the start of each World Bank fiscal year.

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<sup>2</sup>In addition to 39 LTMs that graduated after being LICs in 2000, there are three middle income countries that have been low-income at some point since 2000 that are included in this group (Timor Leste, Equatorial Guinea, and Papua New Guinea). See tables 1 and 2 for a list of LICs and LTMs.

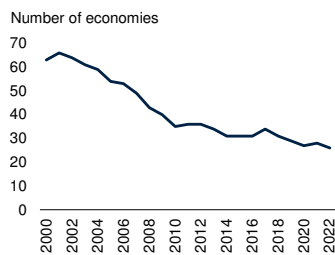
<sup>3</sup>The Democratic People's Republic of Korea is included in the total of 26 LICs, but excluded from all subsequent analysis, due to lack of data.

<sup>4</sup>The GNI is based on Atlas method which uses a convergence factor to U.S. dollars taking account of a moving average of the market-exchange rate, adjusted for differences between domestic and international inflation. For full details, see: <https://datahelpdesk.worldbank.org/knowledgebase/articles/378832-what-is-the-world-bank-atlas-method>.

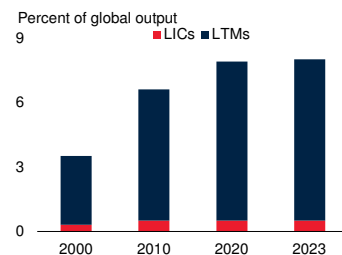
## FIGURE 4.1 Developments in LICs and LTMs

The rate at which low-income countries are graduating to middle-income status has slowed markedly since 2010. Current LICs account for about 9 percent of the global population and less than 1 percent of global output, but they are home to more than 40 percent of people experiencing extreme poverty. Geographically, LICs are heavily concentrated in Sub-Saharan Africa. Acute food insecurity in LICs has recently increased and is mainly in countries affected by fragility and conflict.

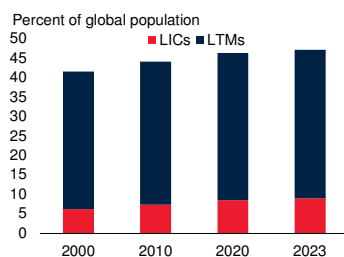
### A. Number of LICs



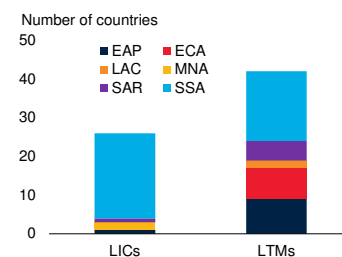
### B. Contribution to global output



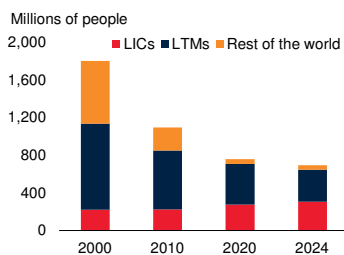
### C. Contribution to global population



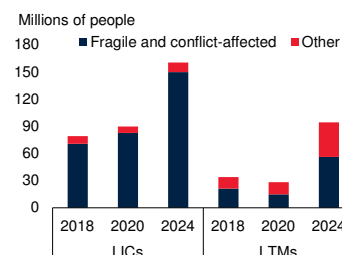
### D. Current LICs and LTMs by region



### E. Number of extreme poor



### F. Acute food insecurity



Sources: Global Report on Food Crises (database); WDI (database); World Bank.

Note: EAP = East Asia and the Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa. LICs = low-income countries; LTMs = LICs turned into middle-income countries.

A.D. LICs count includes the Democratic People's Republic of Korea.

B. Share of LICs and LTMs output in world output.

C. Share of LICs and LTMs population in world population.

E. The number of poor in today's LICs, LTMs, and the rest of the world.

F. Bars show the number of people in food crisis as classified by the Integrated Food Security Phase Classification Phase 3, that is, in acute food insecurity crisis or worse.

C). Twenty-two of them are in Sub-Saharan Africa (SSA) and seventeen of them are classified as being in fragile and conflict affected situations (FCS; figure 4.1D).

Over the last decade, the rate at which LICs have been graduating to middle-income has slowed, set

back by anemic growth, high levels of conflict and violence, and escalating effects from climate change. In the face of overlapping global shocks, poverty in LICs has increased since 2019—LICs now account for more than 40 percent of extreme poverty worldwide and about four-in-ten of their population are estimated to have experienced extreme poverty last year (figure 4.1.E; World Bank 2024a). Food insecurity, which is concentrated in fragile and conflict-affected situations, has intensified (figure 4.1.F). Reflecting these forces, in LICs, only about 4 percent of Sustainable Development Goals adopted by the United Nations in 2015 are on track (Sachs, Lafortune, and Fuller 2024).

Reversing these trends and delivering global development priorities will require sustainably increasing growth rates in LICs so that many more become middle-income. Against this backdrop, this chapter presents a comprehensive review of the progress made by LICs and LTMs in the first quarter of this century. It seeks to illuminate factors that helped drive graduation to middle-income status in the past and analyze growth and graduation prospects for LICs today. It addresses the following questions:

- What are the salient macroeconomic features of today's LICs?
- How has growth evolved in LICs since the turn of the century?
- What challenges and opportunities stand between today's LICs and graduation?
- What are the policy priorities to improve graduation prospects?

**Contributions.** This chapter makes several contributions to the literature.

- *Main features and performance of LICs.* The chapter analyzes how the structural features of LICs today differ from countries that were considered low-income in the past. In addition, it documents a dismal growth performance in many LICs over the past fifteen years and highlights how, despite the global rebound from the 2020 global recession, the poorest countries have fallen further behind

LTM across a wide variety of key development indicators. It also assesses implications for the future pace of graduation to middle-income status. Previous studies have examined the macroeconomic developments of different groups of EMDEs, including the larger group of lower-middle-income and low-income countries (Chrimes et al. 2024; IMF 2024a). Some others examined transitions at higher income levels, with a focus on the middle-income group (World Bank 2024b). This study focuses exclusively on LICs because of their particular characteristics: they have substantial development gaps relative to other EMDEs; are geographically concentrated; and face greater vulnerability to a range of shocks including those related to conflict, climate change, and commodity price swings.

- *Growth accelerations.* The chapter assesses the recent history of growth accelerations in LICs—periods defined by robust and sustained economic growth, with concomitant large improvements in varied economic and development metrics. It highlights how these sustained growth surges have been central to many LTM graduations, and how the COVID-19 pandemic snuffed out all but one of the ongoing low-income accelerations in 2020. Selected case studies shed light on the drivers behind the comparatively narrow set of growth accelerations that took root in countries at income levels similar to today’s LICs.
- *Opportunities and challenges.* The chapter discusses growth opportunities and challenges that could accelerate or derail graduation. For example, in the context of the clean energy transition, it considers how key macroeconomic variables evolve around energy and mineral discoveries. In addition, the chapter systematically surveys how LICs could take advantage of endowments—such as natural resources (including tourism potential), youthful populations, and scope for greater economic integration—to kickstart growth and transformation. The chapter then analyzes various risks which, if they crystallized, could further worsen economic performance in LICs, including those related to conflict,

climate change, fiscal vulnerabilities, geographical challenges, declining domestic productivity, and a less favorable external environment.

- *Policy priorities.* The chapter provides a rich appraisal of national and global policy priorities to help LICs tackle the challenges confronting them, capitalize on their comparative advantages, and accelerate growth and graduation. The chapter does not attempt to rank policy recommendations, recognizing that country circumstances differ and may dictate different priorities. Instead, the chapter categorizes policies into those that are broadly cross-cutting, and those that are most relevant to subsets of LICs.

**Main findings.** The chapter presents the following main findings:

**Adverse initial conditions.** LICs today are poorer than LTMs were in 2000. Commensurately, physical and human capital scarcity is more pronounced in the former group. Low-productivity agriculture comprises a larger share of output in LICs today than it did in LTMs in the past. LICs today also tend to be less open to trade and are more geographically concentrated. They are also more reliant on official development assistance (ODA) than LTMs were in 2000.

**Fifteen lost years in LICs.** Annual per capita GDP growth in LICs averaged 2.2 percent in the first decade of this century. However, over the last fifteen years, incomes have barely increased, with per capita growth averaging less than 0.1 percent annually.<sup>5</sup> Amid increased conflict in some LICs, debt-related challenges in others, and a general deterioration in institutional quality, structural transformation has lost momentum and progress in reducing extreme poverty has stalled. On average, LICs have become poorer relative to LTMs and other EMDEs. Based on 2010-19 average growth rates, only six LICs—less than a quarter of eligible countries—would be on course

<sup>5</sup> Summary statistics for output in LICs may differ between Chapter 1 of the Global Economic Prospects and this chapter due to the omission in the former of some LICs for which forecasts are not available.

to graduate by 2050, as compared with 42 graduations between 2000 and today, nearly two thirds of eligible countries.

**Correlates of growth accelerations.** Most macroeconomic and development improvements occur during growth accelerations. Since 1990, the typical growth acceleration starting from low-income levels has lasted almost 16 years, with per capita growth rising to nearly 7 percent annually, compared to slight contractions, on average, in non-acceleration years. Growth accelerations have coincided with improvements in a wide range of economic and development indicators—including investment, education, poverty reduction, and governance—compared with slower or no improvement, on average, outside accelerations.

**Triggers of growth accelerations.** A diverse range of productivity- and stability-enhancing policies have helped to ignite growth accelerations. Case studies of growth accelerations and graduations from low-income levels indicate there is no one-size-fits-all strategy to kickstart growth, but there are apparent commonalities. First, peace and a baseline level of political stability are essential. Second, rapid investment growth tends to yield large dividends in low-income contexts. Third, accelerations were often preceded by reforms that increased the market orientation of the economy.<sup>6</sup> Fourth, although institutions do not need to be fully developed to initially enter an acceleration, policies that promote macroeconomic stability and improve conditions for private enterprise, backed by comparatively capable governance, help sustain accelerated growth.

**Challenges to graduation.** Daunting obstacles stand between today's LICs and graduation. First, there are many pressing institutional challenges. Two-thirds of LICs are in fragile and conflict situations, with some experiencing intense conflicts. Wider institutional and social fragilities further impede graduation prospects. And, following an acutely challenging decade, appetite

for necessary reforms may be waning—especially where macroeconomic adjustments have resulted in social frustration or where growth has been perceived as poor quality, jobless, and not inclusive. Second, domestic macro-financial vulnerabilities are mounting. Fiscal space has narrowed since the mid-2010s, with half of LICs in or at high risk of debt distress in 2024. Even in some LICs where growth has been comparatively faster, the recent drivers of growth may be reaching their limits. Finally, LICs confront a barrage of external hindrances to growth. Declining global potential growth and advancing trade fragmentation pose headwinds to export-led development. Geopolitical tensions complicate the outlook and threaten further shocks. Meanwhile, clustered in Sub-Saharan Africa, LICs are geographically concentrated, highly exposed to climate shocks, and lack resources for adaptation.

**Growth opportunities in LICs.** There is latent potential in LICs that, if properly harnessed, could raise growth rates and accelerate graduation. First, as the rest of the world confronts demographic aging, the majority of LIC populations will become prime working age, facilitating increased domestic savings. Second, some LICs with ample natural resources could reap dividends supplying climate transition industries. Many LICs have great potential for agricultural productivity growth and agro-industrialization. Others have substantial potential as tourism destinations. Most LICs also have promising conditions for generating cheap solar energy. Third, even with sluggish global trade growth, trade integration in SSA could facilitate economies of scale and better access to global value chains. However, capturing the potential gains from these opportunities will require them to address a broad range of related constraints.

**Policy priorities.** LICs will have to generate sustained and stronger investment growth to meet development and climate objectives and durably raise incomes. Such efforts are far more likely to work in concert with improved institutions and reforms that foster macroeconomic stability. Sustaining an investment push in many LICs will likely also require the creation of fiscal space, both to finance projects directly and to lower the cost of

<sup>6</sup>Growth accelerations were often preceded by policy reforms to boost competitiveness. Such reforms included: eliminating price controls, reforming exchange rate policies, liberalizing financial sectors and capital accounts, reducing trade barriers, easing tax and regulatory burdens, and reforming state-owned enterprises, among others.



finance across the economy. Meanwhile, for LICs in fragile and conflict situations, fostering peace and greater stability is a first order prerequisite for growth and transformation. Commodity dependent LICs—especially energy and metals exporters—will need to strengthen the management of natural resource extraction and revenues to deliver broad economic benefits. The global community has a critical role to play. Over the medium term, LICs will have much-improved chances of raising living standards if the global trading system is open, rather than sympathetic to beggar-thy-neighbor policies. Along with open trade, increased flows of concessional finance and technical assistance will be needed, given the large climate-related and other investment gaps. For many LICs, receipt of timely debt relief is an urgent priority.

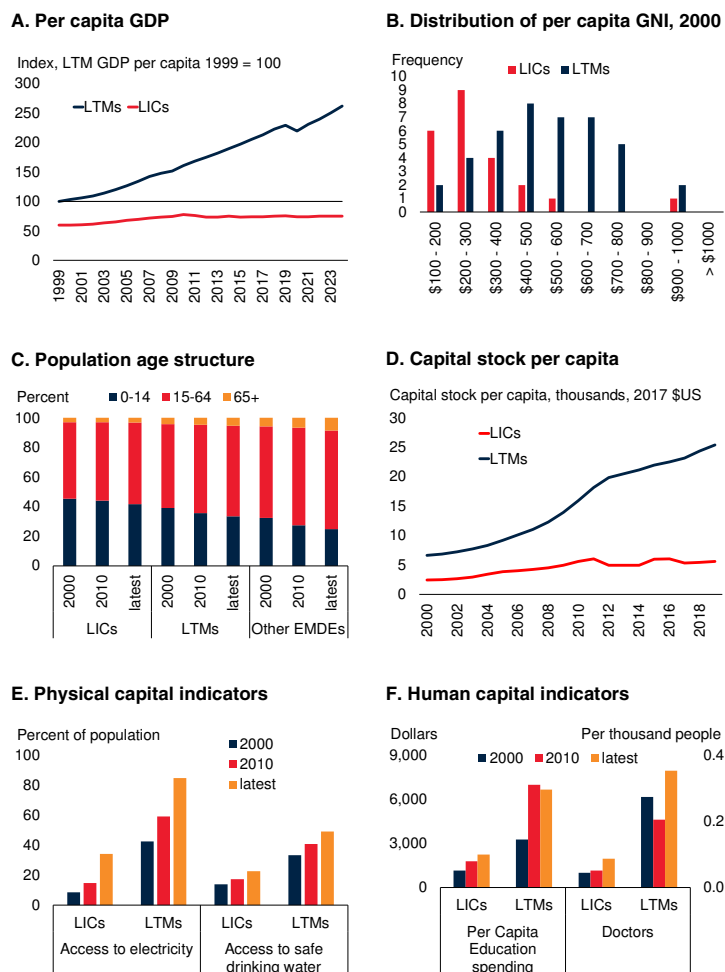
## Macroeconomic features of LICs and LTMs

Today, there are sizeable income and development gaps between LICs and LTMs that reflect both differing initial conditions in 2000 and contrasting development trajectories over the last quarter century. Today’s LICs remain substantially poorer and more capital scarce than LTMs were at the turn of the century, with weaker institutions, higher shares of informal employment, and a greater proportion of output concentrated in low-productivity agriculture. LICs also remain less open than were LTMs, limiting gains from trade, with more precarious fiscal positions. Despite these more challenging circumstances, LICs receive about the same level of development assistance per person as LTMs did in 2000, and less than LTMs do today. These characteristics indicate that, in aggregate, LICs face a steeper climb to graduate to middle-income than LTMs did in the past.

**Lower per capita GDP.** As a group, LTMs have long been wealthier than today’s LICs. Indeed, current LICs remain substantially poorer than LTMs were at the turn of the century. In 2000, the population-weighted per capita GDP of LICs was less than 60 percent of the LTM level. Since then, the income gap has widened dramatically: in 2023, the population weighted per capita GDP in

**FIGURE 4.2** Macroeconomic features of LICs and LTMs

LICs today are far poorer than LTMs were in 2000, and the income gap between the two groups has widened over time. LICs also are younger but are gradually converging toward the population structure of LTMs in 2000. Capital stock per capita in LICs is estimated to be about one fifth of the level in LTMs, while proxies for physical and human capital are much weaker.

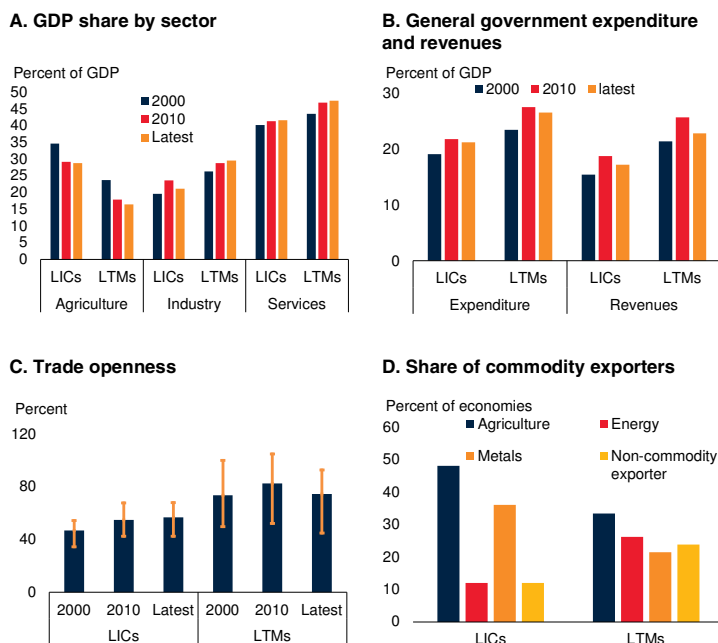


Sources: Penn-World Tables (database); WDI (database); World Bank.  
 Note: EMDEs = emerging market and developing economies; LICs = low-income countries; LTMs = LICs turned into middle-income countries.  
 A. Lines represent population-weighted GDP per capita. Country groups are consistent over time.  
 B. Horizontal axis numbers represent upper end of \$100 bins for GNI per capita in 2000 (current \$US Atlas method).  
 C. Simple averages of country groups. “Latest” shows data for 2022.  
 D. Lines represent population-weighted averages. Estimated with PPP exchange rates in real 2017 U.S. dollars.  
 E.F. Medians of country groups. “2000”, “2010”, and “latest” are calculated as the five-year average per country from 1998-2002, 2008-2012, and 2018-2022, respectively, to maximize available observations.

LICs was about 30 percent of the LTM level (figure 4.2A). Many LTMs graduated partly because they started the century with higher incomes (figure 4.2B). Nonetheless, several LTMs were poor by LIC standards in 2000. For example, Cambodia, the Kyrgyz Republic, Laos, Nepal, and

**FIGURE 4.3 Macroeconomic features of LICs and LTMs (continued)**

Agriculture's share of total output is larger in LICs than LTMs, and has declined less, on average, since 2000. Government expenditure is constrained by revenue weakness in LICs. Trade openness has increased somewhat in the average LICs since 2000, although it remains well below levels typical in LTMs. Most LICs are commodity exporters, primarily of agricultural products and metals, whereas more LTMs export energy.



Source: International Monetary Fund; WDI (database); World Bank.

Note: EMDEs = emerging market and developing economies; LICs = low-income countries; LTMs = LICs turned into middle-income countries.

A. Simple averages of country groups. "2000", "2010", and "latest" are calculated as the five-year average per country from 1998-2002, 2008-2012, and 2019-2023, respectively, to maximize available observations.

B. Simple averages of country groups. "2000", "2010", and "latest" are calculated as averages per country from 1998-2002, 2008-2012, and 2022-2024, respectively.

C. Bars indicate simple averages of country groups. Whiskers indicate interquartile range. "2000", "2010", and "latest" are calculated as the five-year average per country from 1998-2002, 2008-2012, and 2019-2023, respectively. Trade openness is defined as the ratio of the sum of exports and imports to GDP.

D. Taxonomy of commodity exporters follows the definition in chapter 1 of the *Global Economic Prospects, January 2025*.

Tajikistan were all around or below median for LIC living standards in 2000. As such, the incomes levels of LICs today reflect weaker growth rates than in LTMs, as well as worse starting points.

**Younger populations.** Demographics largely determine the potential size of the country's workforce, which is a key driver of trend growth rates in EMDEs. LIC populations are considerably younger than those in LTMs, which in turn tend to be younger than in other EMDEs. In the average LIC, about 40 percent of the population is

under age 15 compared to a third in LTMs (figure 4.2C). The proportion of children in LICs remains slightly higher today than it was in LTMs in 2000, while the proportion of working-age adults and those 65 or older is marginally lower. Over the coming decade today's LICs are likely to converge to broadly the population age structure that characterized LTMs in 2000.

**Limited physical capital.** The stock of physical capital per worker is critical to per capita incomes, because greater capital depth enables increased productivity. Physical capital is more severely limited in LICs than in LTMs. Prior to the COVID-19 pandemic, capital stock per capita in LICs was estimated to be about one fifth of its level in LTMs and still materially lower than the level in LTMs in 2000 (figure 4.2D). Proxies for the availability of infrastructure services underscore acute capital scarcity. About a third of the population in the average LIC has access to electricity compared to just over 40 percent in LTMs in 2000 and more than 80 percent in recent years. Similarly, just over 20 percent of the population in the average LIC has access to safe drinking water, less than half the proportion in LTMs today and about two-thirds of the proportion in 2000 (figure 4.2E).

**Lower human capital development.** Human capital—embodied in education, technical know-how, and healthcare provision—is a further key determinant of productivity levels and is relatively scarce in LICs. The secondary school enrollment rate in the median LIC is currently 39 percent—well below the 56 percent attained by the median LTM in the year of graduation to middle-income status, and per capita education spending in today's LICs is only about 70 percent of the LTM level in 2000. Comparatively low per capita outlays on education reflect low incomes rather than government priorities—education spending in LICs relative to GDP is higher than in LTMs. The number of doctors per person has roughly doubled since 2000 in the average LIC but remains less than a third of the comparable number in LTMs in 2000 (figure 4.2F).

**Sectoral composition of output.** The breakdown of GDP into agricultural, industrial and services output offers a broad marker of the sophistication

of an economy's production process—a lower share of agricultural output in GDP tends to correlate with higher per capita incomes. Services has been the largest sector in both LICs and LTMs over the past quarter-century, although by a larger margin in LTMs (figure 4.3A). The proportion of agricultural output in GDP has declined across the board, but agriculture remained the second-largest sector in LICs throughout the period. This contrasts with LTMs, where industry formed the second largest sector, with a gradually growing share of output. In LICs, the industrial output share increased between 2000 and 2010, but subsequently receded again. The average agriculture share in LICs has consistently been more than 10 percentage points higher than in LTMs and averages 28 percent today compared with 19 percent in the average LTM when it became middle-income.

**Informality.** Consistent with lower incomes and smaller non-agricultural sectors, informality is substantially more prevalent in LICs than in LTMs. At about 82 percent in the median LIC in 2022, the proportion of informal employment is estimated to be 18 percentage points higher than in the median LTMs, with the informality gap having grown over time (ILO 2024).<sup>7</sup> Informality also remains 8 percentage points greater in the typical LICs today than it was in LTMs in 2000. Greater informality is sometimes a correlate of lesser development rather than a cause—lower wages among informal workers may reflect pre-existing skills rather than informality per se (Ohnsorge and Yu 2022). However, informality can also be exacerbated by poor governance and regulatory frameworks, which can disincentivize formalizing business activity, and by a lack of financial development that constraint entrepreneurs' access to capital. Elevated informality also tends to worsen fiscal policy challenges and curb resources for development by constraining the taxable base of activity.

**Weaker fiscal positions.** Fiscal capacity—especially tax revenue as a share of output—constrains government sector development efforts,

while elevated debt burdens increase the risk of financial crises. LICs generally have lower government spending and revenue ratios than LTMs. Although the size of the general government sector in LICs has increased in the last quarter-century, it remains materially smaller than in LTMs in 2000. General government expenditures in LICs are currently lower by about 2 percentage points of GDP than in LTMs in 2000 while revenues are lower by 4 percentage points. LICs have modestly closed the revenue gap with LTMs since 2000, while the differential in government spending is little changed (figure 4.3B). Today's LICs are running larger government deficits, on average, than LTMs have at any point since 2000. They also tend to have larger debt-to-GDP ratios with weaker buffers, and a greater share of LICs are in or at high risk of debt distress (Mawejje 2024a).

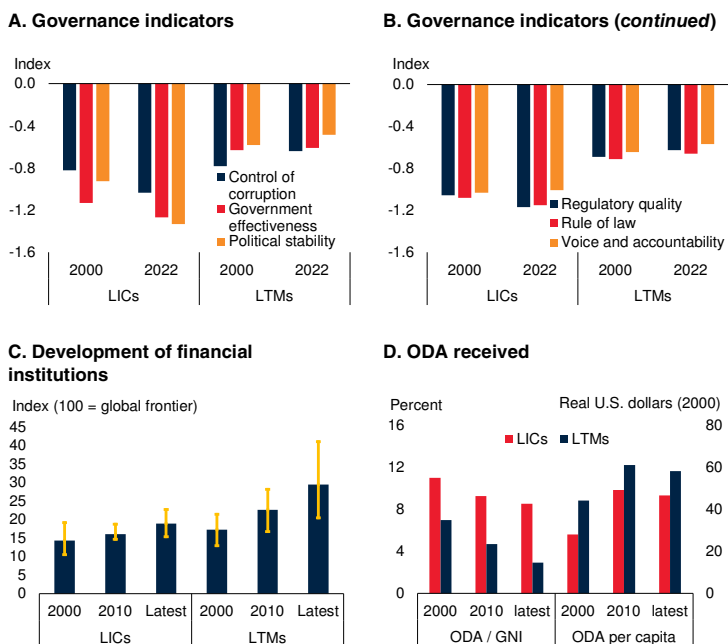
**Lower trade openness.** Trade can embody the transfer of technology, as well as facilitate more efficient resource allocation. Accordingly, greater trade openness is generally associated with higher per capita incomes (Cerdeiro and Komaromi 2017). Trade-to-GDP ratios have been consistently lower in LICs than LTMs—around 50 percent in LICs compared with over 70 percent in LTMs (figure 4.3C). Even so, the trade openness gap between LICs and LTMs has narrowed from an average of 26 percentage points of GDP in 2000 to about 18 percentage points in recent years. This pattern reflects a sharper increase in trade openness in LICs due to higher average import ratios. Trade openness in LTMs is not significantly different from other EMDEs.

**Greater commodity reliance.** Most LICs and LTMs are commodity exporters. This preponderance is more marked among LICs, only three of which do not have export baskets dominated by primary products, compared with about a quarter of LTMs. The profile of commodity exports differs between the two groups, however. Agricultural products dominate exports in more than half of LIC commodity exporters, with most of the remainder exporting metals (figure 4.3D). Only three LICs have substantial export shares of energy products, with the majority of LICs reliant on energy imports. By contrast, over a third of LTM commodity exporters are energy exporters.

<sup>7</sup>Estimated values for self-employment are used as a proxy for informal employment.

**FIGURE 4.4 Macroeconomic features of LICs and LTMs (continued)**

Governance measures indicate a substantial shortfall in the quality of institutions in LICs, and the gaps between LICs and LTMs have widened over time. Financial institutions remain underdeveloped in the average LIC but have surpassed the comparable measure for LTMs in 2000. LICs have recently received less real ODA per person than LTMs and about the same amount as LTMs were receiving in 2000.



Sources: International Monetary Fund; Our World in Data; UN Department of Economic and Social Affairs; WDI (database); WGI (database); World Bank.

Note: EMDEs = emerging market and developing economies; LICs = low-income countries; LTMs = LICs turned into middle income countries; ODA = Official Development Assistance.

A.B. Simple averages of Worldwide Governance Indicators by country group and year. Indices are units of a standard normal distribution, with mean = zero, a standard deviation of one, and running from approximately -2.5 to 2.5, with higher values corresponding to better governance.

C. Bars show simple average of financial institutions development index. Whiskers indicate inter-quartile range. Index is normalized such that 1 = the inter-temporal frontier and 0 = the intertemporal lowest reading. Latest = 2021.

D. Median ODA-to-Gross National Income ratios. ODA per capita calculated as ODA per head in current U.S. dollars, deflated by the U.S. consumer price index. "2000" and "2010" are calculated as the five-year average per country from 1998–2002, 2008–2012. Latest = 2022.

### Weaker governance and institutional quality.

Institutional quality has been posited as a major factor in creating conditions that cause low incomes, such as capital scarcity. Improve institutional quality is commonly found to enhance the effectiveness of other possible growth drivers, such as public investment (Acemoglu and Robinson 2013; World Bank 2024c). Measures of governance and institutions indicate that institutional frameworks are significantly weaker in LICs than LTMs. According to the World Bank's Worldwide Governance Indicators, LICs are substantially

further from the frontier than LTMs in the areas of control of corruption, government effectiveness, political stability, regulatory quality, the rule of law, and the accountability of governments (figures 4.4A and 4.4B). Importantly, the institutional gap between LTMs and LICs has widened as measures generally have deteriorated for LICs and improved for LTMs. For example, while control of corruption was comparable among LICs and LTMs in 2000, by 2022 the average LIC lagged the average LTM by 11 percentile ranks. Other governance indicators underscore a widening gap. Political stability in the average LIC is 16 percentile ranks lower than in the average LTM, a 10-percentile rank divergence since 2000.

**Weaker financial development.** LICs have shallow and narrow financial sectors characterized by limited credit creation and extensive capital account controls. Compared with other EMDEs, LTMs also have relatively underdeveloped financial sectors, but to a lesser degree, and with greater variation among economies. The early development of financial institutions—such as increasing coverage of, and competition between, such foundational sectors as commercial banking and basic insurance—has been associated with stronger growth in low-income settings (Arcand, Berkes and Panizza 2012; Sahay et al. 2015). Measures of the depth and sophistication of financial institutions suggest that LICs today are roughly at parity with LTMs in 2000, after which point LTMs underwent material financial deepening (figure 4.4C).

**Official development assistance.** The typical LIC has long received more official development assistance (ODA) as a proportion of GNI than the typical LTM (figure 4.4D). This difference has widened somewhat over time even as ODA-to-GNI ratios have generally declined. In 2000, the ODA-to-GNI ratio was about 4 percentage points greater in LICs than in LTMs whereas in recent years it was close to 6 percentage points greater. However, this discrepancy reverses when considering real ODA per capita, with LICs currently receiving less on this measure than LTMs, as was also the case in 2000 and 2010. Indeed, LICs are now receiving essentially the same quantum of real development assistance per person as flowed to

LTMs at the turn of the century, despite their more challenging conditions.

## Growth and structural transformation

Rapidly advancing globalization in the 2000s, as well as the integration of China into the global economy and the resultant surge in commodity demand, offered opportunities for LICs to raise productivity and living standards through trade and financial integration (Kose and Ohnsorge 2020). Since the late 2000s, the external environment has proved more turbulent, with bouts of financial stress, large commodity price swings, and the COVID-19 pandemic buffeting the global economy. In addition, greater geopolitical tensions and increasing trade fragmentation have emerged as new and broad headwinds in a global economy already strained by declining potential growth.

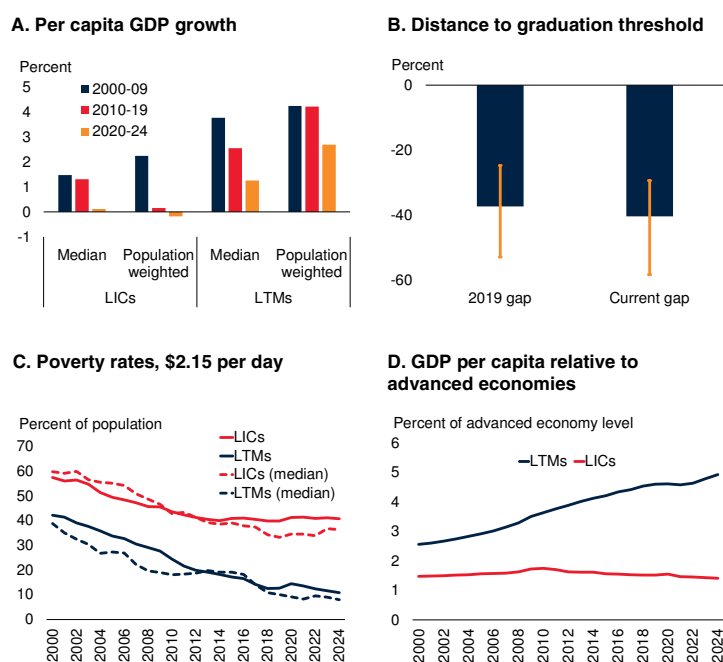
These trends and shocks have weighed on per capita growth and development in LICs and LTMs. In addition, many LICs have experienced adverse domestic developments such as civil and cross-border conflicts. In aggregate, the record shows slowing progress in LTMs, after a period of rapid catch-up in the 2000s. In LICs, the pace of economic progress has been anemic since 2000, worsening after 2010 and further stalling following the COVID-19 pandemic. At the same time, structural transformation has lost momentum.

**Declining per capita growth.** Dividing the 25 years since 2000 into three periods (2000-09, 2010-19, and 2020-2024), an overall trend of decelerating per capita growth in both LTMs and LICs is evident (figure 4.5A). Most LTMs made solid progress over the 2000s with the median country registering per capita growth of 3.8 percent. Notably high growth rates were achieved by transition economies in Europe and Central Asia that recovered from the deep recessions associated with the end of the Soviet Union, as well as some economies in East Asia and the Pacific (Cambodia, Viet Nam) where integration into global supply chains accelerated (Steinbach 2019).

In contrast, per capita growth was muted in LICs and the group largely missed out on the potential

**FIGURE 4.5 Growth and structural transformation since 2000**

Per capita growth has declined in LTMs over the last quarter-century. In LICs, per capita GDP has near-flatlined for 15 years, in part reflecting conflict-driven economic collapses in several countries. The global shocks of the early 2020s set back LIC graduation prospects, with extreme poverty rates in LICs no longer declining. Per capita GDP as a proportion of advanced economy levels has doubled in LTMs since 2000 but made no progress in LICs. Progress on poverty reduction has stalled in LICs.



Sources: Mahler and Lakner (2022); World Bank Poverty and Inequality Platform (database); WGI (database); World Bank.  
 Note: LICs = low-income countries; LTMs = LICs turned into middle-income countries.  
 A. GDP aggregates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. GDP per capita population weighted aggregates are calculated as aggregated GDP divided by aggregate population. Median growth rates represent the median annual average growth rate for each country group in each period.  
 B. Bars represent distance in percentage points of GNI per capita (Atlas method) from the respective graduation thresholds; whiskers represent the 25th and 75th percentiles. Pre-COVID gap represents the median distance from the graduation threshold of \$1035 in FY2021 based on 2019 data; the current gap represents the median distance from the FY2025 threshold of \$1145 based on 2023 data.  
 C. Solid lines represent population-weighted poverty rates in country groups. Dotted lines indicate the median poverty rate in each group each year.  
 D. Population-weighted GDP per capita as a percent of population-weighted GDP per capita in advanced economies.

dividends of rapid global growth. Per capita growth in the median LIC was just 1.5 percent in 2000-09, although progress was markedly faster in some economies (Ethiopia, Mozambique, Rwanda, Uganda). Even in a period characterized by favorable global conditions and rapidly rising commodity prices, there was virtually no increase in incomes in the bottom quartile of LICs.

In the 2010s, median per capita growth slowed appreciably in LTMs, to an average of 2.6 percent,

mirroring a broader deceleration in EMDE growth. Some of this deterioration reflected the protracted decline in commodity prices that started around 2014 and weighed on LTM commodity exporters (Angola, Azerbaijan, Equatorial Guinea, Nigeria). In addition, weakening external demand growth and cross-border financial flows from advanced economies following the global financial crisis and euro area debt crisis created a less supportive global environment.

Per capita growth in the median LIC slowed slightly in 2010-2019, edging down to 1.3 percent annually. However, sharp slowdowns or outright contractions in some large LICs resulted in population-weighted per capita income growth slowing to a crawl, increasing by just 0.2 percent annually. Conflicted-related growth collapses in Sudan, Syria, and Yemen played an outsized role in pinning back progress. Ethiopia and Rwanda stood out as LICs that still made substantial strides in raising average incomes. Aided by domestic growth strategies (see box 4.1), they posted per capita growth rates of 6.5 percent and 4.6 percent, respectively.

The global shocks of the early 2020s were markedly more adverse for LICs than those of the preceding two decades. The median LIC is estimated to have registered annual average per capita growth of just 0.1 percent in 2020-24, with population-weighted per capita GDP contracting slightly. Headwinds in the wake of the COVID-19 pandemic included large import price shocks, sluggish global trade growth, and sharply higher interest rates in advanced economies. In all, the median LIC is now close to 5 percentage points further from the graduation threshold than it was in 2019 (figure 4.5B). Per capita growth also slowed markedly in LTMs in 2020-24, but higher initial incomes and greater fiscal resources endowed greater resilience than in LICs. The median LTM grew 1.3 percent annually in per capita terms—five times the pace of the median LIC. Growth was materially faster in LTMs when weighted by population, primarily reflecting relatively strong growth in India.

**Slower extreme poverty reduction.** More than 40 percent of the population in LICs is estimated to remain in extreme poverty (that is, living on less

than \$2.15 per day in 2017 PPP), about four times the proportion of the LTM population in extreme poverty (figure 4.5C). About two thirds of people in LICs live on less than \$3.65 per day, compared with closer to one third in LTMs. At the start of the century, the two groups were more closely comparable, but while the extreme poverty rate in LTMs has fallen by more than 31 percentage points since 2000, it has declined by just 17 percentage points in LICs.

Much weaker progress on poverty reduction in LICs than in LTMs is a relatively recent phenomenon. In the 2000s, LICs and LTMs reduced poverty at a broadly similar pace. Progress on poverty reduction in LICs slowed sharply thereafter, in part as a result of conflicts in the Middle East, Sudan, and South Sudan in the first half of the 2010s. Extreme poverty levels in LICs increased in 2020 and have since stagnated. The confluence of these earlier deep shocks in a handful of LICs—from which there has generally been limited recovery—and broader recent weakness has resulted in a slight rise in extreme poverty over the last decade. In contrast, the typical LTM appears on pace to essentially eliminate extreme poverty in the 2030s.

**A reversal of per capita GDP catch-up.** All else being equal, capital accumulation and growth should be faster in capital-scarce economies, where the marginal product of capital is greater. Indeed, if other structural factors that influence growth rates—such as access to technology, education, and the quality of institutions—are controlled for, then lower-income economies generally exhibit a tendency toward faster income gains than higher-income economies (Dieppe 2021). However, large and persistent shortfalls in other structural growth drivers mean that, in practice, poorer countries have often not made much progress towards the income levels of richer countries, even over extended periods of time (Barro 2012).

The per capita GDP trajectory in LICs since 2000 illustrates just such a failure of income convergence. Per capita GDP in LICs in aggregate has made no progress toward the advanced-economy frontier since 2000, with considerable gains in a handful of LICs offset by much weaker performance elsewhere (figure 4.5D). LICs made some

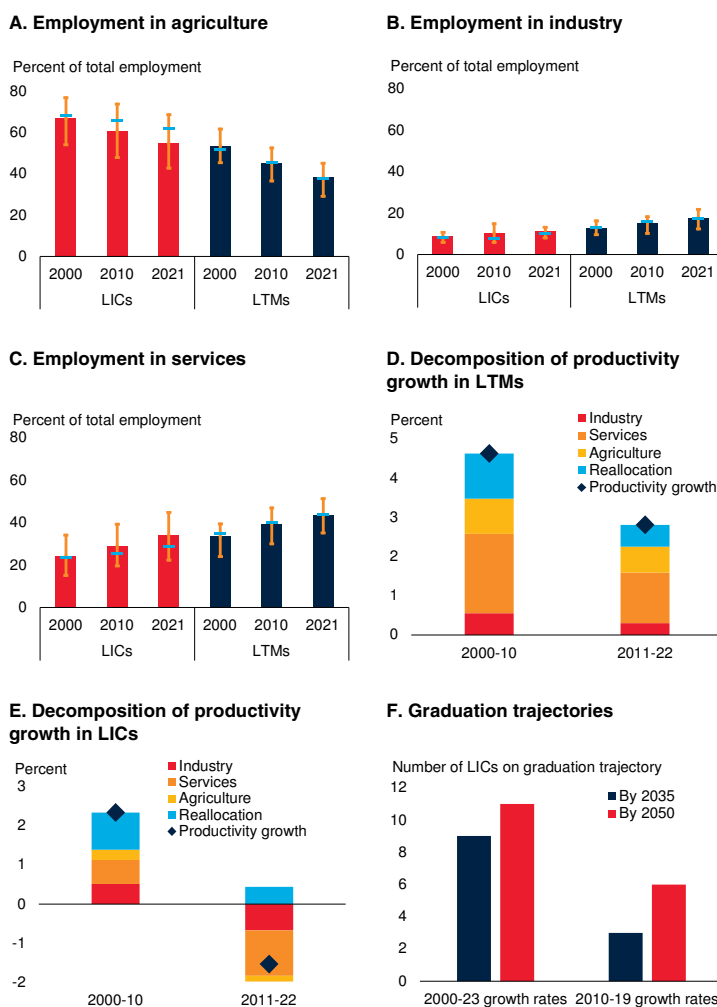
progress between 2000 and 2010, with per capita incomes increasing from 1.5 to 1.8 percent of advanced-economy levels. Since then, however, LICs have backslid, regressing to 1.4 percent of advanced-economy levels in 2023-24. In contrast, per capita GDP in LTMs has made solid, albeit slowing, gains on advanced economies, with per capita GDP as a proportion of the advanced economy level near-doubling in the first quarter of the 21st century, from 2.6 percent to 4.9 percent.

**Structural transformation.** Rapid structural transformation has been crucial to long-term growth successes in EMDEs (Hallward-Driemeier and Nayyar 2017). Structural transformation primarily entails the transfer of agricultural labor into industrial and services sectors with higher productivity. This process can be facilitated both by advances in agricultural productivity that free up surplus labor, and by the active development of tradable sectors that offer higher wages, incentivizing labor reallocation (Herrendorf, Rogerson, and Valentinyi 2014; McMillan and Headey 2014). This process, especially when combined with industrialization and integration into global value chains, has historically proved powerful for accelerating labor productivity and broader development, for example in economies in East Asia and the Pacific and Europe and Central Asia. Overall, structural transformation has made notable strides in many LTMs since 2000, albeit to differing degrees. In contrast, structural transformation in LICs appears to be stalling.

LICs have substantially larger shares of employment in agriculture than do LTMs (figure 4.6A). Since 2000, the agricultural share of employment has also declined more quickly in LTMs, falling by about 15 percentage points, compared to 12 percentage points in LICs. Expanding service sectors have absorbed the bulk of freed-up labor, becoming a large source of employment and output in both country groups—the average services employment share increased by 10 percentage points in both LICs and LTMs in 2000-21. In the same period, the average industrial employment share gained only 2 percentage points in LICs, signifying scant progress on industrialization (figures 4.6B and 4.6C). Industrial employment increased more than twice as

**FIGURE 4.6 Growth and structural transformation since 2000 (continued)**

*Agricultural employment is a much greater share of total employment in LICs than in LTMs and the share has declined less since 2000. Industrial employment's share of total employment has increased significantly faster in LTMs than in LICs. Although services employment shares have risen in both groups, declining services sector productivity has been the largest contributor to productivity slowdowns since 2010. After the 2000s, productivity is estimated to have declined outright in all employment sectors in LICs, offset only slightly by continuing labor reallocation out of agriculture. At 2010-19 average growth rates, less than a quarter of LICs appear on course to graduate to middle-income status by 2050.*



Sources: International Labor Organization; WDI (database); World Bank.  
 Note: LICs = low-income countries; LTMs = LICs turned into middle-income countries.  
 A.-C. The shares of agriculture, industry, and services in total output. Bars show the simple unweighted average. Blue markers show the median. Orange whiskers show the interquartile range.  
 D.E. Based on ILO estimates. Within-sector contributions to growth are calculated by assuming constant sectoral employment shares across 2000-10 and 2011-22. The reallocation contribution is the residual, due to reallocation of labor across sectors between the first and final year of each period.  
 F. Graduation trajectories assume that the threshold for middle-income status increases at the same pace as it has on average since 2000.

much in the average LTM, rising 5 percentage points to 18 percent.

**Productivity growth.** Productivity—measured as output per worker—tends to be highest in the industrial sectors of LICs and LTMs, followed by services, with productivity generally lowest in agriculture.<sup>8</sup> Over the first two decades of this century, the evolution of sectoral employment in LICs and LTMs was accompanied by diverging productivity trends. In the 2000s, mean agricultural productivity growth in LTMs, at 2.8 percent, was about twice the pace in LICs. Thereafter, in the 2010s, agricultural productivity decelerated in LICs while accelerating further in LTMs. Mean industrial productivity growth declined in both country groups across the two decades but was close to a percentage point higher in LTMs throughout. Service sector productivity growth followed a similar pattern in LTMs—declining somewhat after the 2000s but remaining solidly positive. In LICs, however, services productivity declined outright in the 2010s, even as services employment swelled.

Although productivity growth weakened in a large share of LICs in the 2010s, productivity collapsed in some larger LICs amid increased conflict and violence. As such, on a population-weighted basis, LIC productivity declined more than 13 percent between 2010 and 2022. Meanwhile, productivity in LTMs continued to make gains, albeit at a significantly reduced pace compared to the 2000s. Headline labor productivity growth can be disaggregated into growth within sectors, and reallocation between sectors. This decomposition reveals that declining services productivity accounted for most of the slowdown in LTMs and LICs in the 2010s (figures 4.6D and 4.6E). In LTMs, diminishing gains from sectoral reallocation were the second largest contributor, reflecting maturing industrialization. In LICs, sectoral reallocation out of agriculture continued to boost headline productivity in the 2010s, but this effect was outweighed by productivity declines within sectors.

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<sup>8</sup>Of course, these are inherently broad categories, encompassing subsectors with differing characteristics regarding typical productivity levels and labor intensity.

**Large gender gaps.** LICs have large gender gaps and progress to close them is stalling. Women in LICs are more likely to engage in informal establishments than men (Malta et al. 2019; Ohnsorge and Yu 2022). The pandemic widened gender disparities in LICs: it had a disproportionate economic impact on women, and women led businesses received less government support (ILO 2023; Torres et al. 2021; United Nations 2021). However, gender inequalities in LICs predate the pandemic, and are often engrained in wider societal and cultural norms. In contexts dominated by patriarchal systems, women are more likely to be less educated, and to engage in low-productivity and uncompensated domestic care activities (World Bank 2012). Female secondary school enrollment rates are lower in LICs than LTMs, on average, and have been declining in recent years. As a percentage of the labor force, female participation is also lower in the average LIC than in the average LTM. Discriminatory laws can prevent women from fully and equally contributing to their economies, and the gaps in LICs in this regard are considerable. The average LIC has about two-thirds of the good practice legislation that provides equal status to both men and women (World Bank 2022a). These gender gaps precipitate inequalities in productivity and earnings and put large constraints on overall growth in LICs. On average, in LICs, long-run GDP per capita could potentially be more than 20 percent higher if all gender employment gaps were to be closed (Pennings 2022).

**Fading graduation prospects.** The recent trend of especially weak growth has seen graduation prospects slip further away in many LICs. However, this pattern is not universal. To advance toward graduation, per capita income only needs to grow more quickly than the graduation threshold. Since 2000, the middle-income threshold has increased by 1.8 percent per year, on average. Assuming this trajectory sustains, attaining middle-income status in 2050 will require per capita income of just over \$1,800.

Set against this goal, a small number of LICs appear on pace to graduate over the second quarter of this century. Were average growth rates to match those of the 2010s, three LICs



(Ethiopia, Rwanda, Uganda) would be expected to graduate by 2035 (figure 4.6F). By 2050, only another three LICs would be expected to make the transition. In other words, based on 2010-19 average growth rates, the number of LICs would decline by less than a quarter, from 26 this year to 20 in 2050. After graduation became notably rarer in the 2010s than in the 2000s, this would represent a significant further slowdown. Were LICs instead able to lift future growth rates to match their post-2000 average, graduation prospects would be somewhat better. Nine LICs would be expected to graduate over the next decade—roughly in line with the graduation rate since 2010—with a further two becoming middle-income countries by 2050.

## Growth accelerations in LICs

For many of today's LICs, graduating in the next ten or even twenty-five years would require dramatic improvements in per capita growth rates. This appears a daunting task given the deep challenges the typical LIC has faced over the past fifteen years. However, since 1990 there have been many instances in which past and present LICs have achieved growth accelerations—episodes of sizeable and sustained increases in real per capita growth. The following section examines the characteristics of growth accelerations in LICs to illustrate the circumstances under which they have arisen and illuminate the tight link between growth accelerations and broader development successes.

Growth accelerations are defined—following Gootjes et al. (2024)—as spells of eight or more years during which per capita growth rates exceed a country-specific threshold that incorporates both the long-term average and volatility of per capita growth (see annex 4.1 for methodological details). Identifying growth accelerations in this manner is useful for several reasons. First, growth can be highly volatile in LICs, even over extended periods. Disregarding volatility may generate spurious signals regarding when living standards are durably increasing. Second, growth accelerations provide a simple empirical method to identify periods in which potential growth is likely

to have increased. This is beneficial because raising potential growth is a first-order concern for LIC policymakers, but many models of potential growth—often developed for advanced economies—are ill-suited to data-poor environments. Finally, focusing on transformative growth from LIC status avoids equating today's LICs with LTMs that graduated mainly because their income level was already close to the threshold in 2000.

### Features of LIC growth accelerations

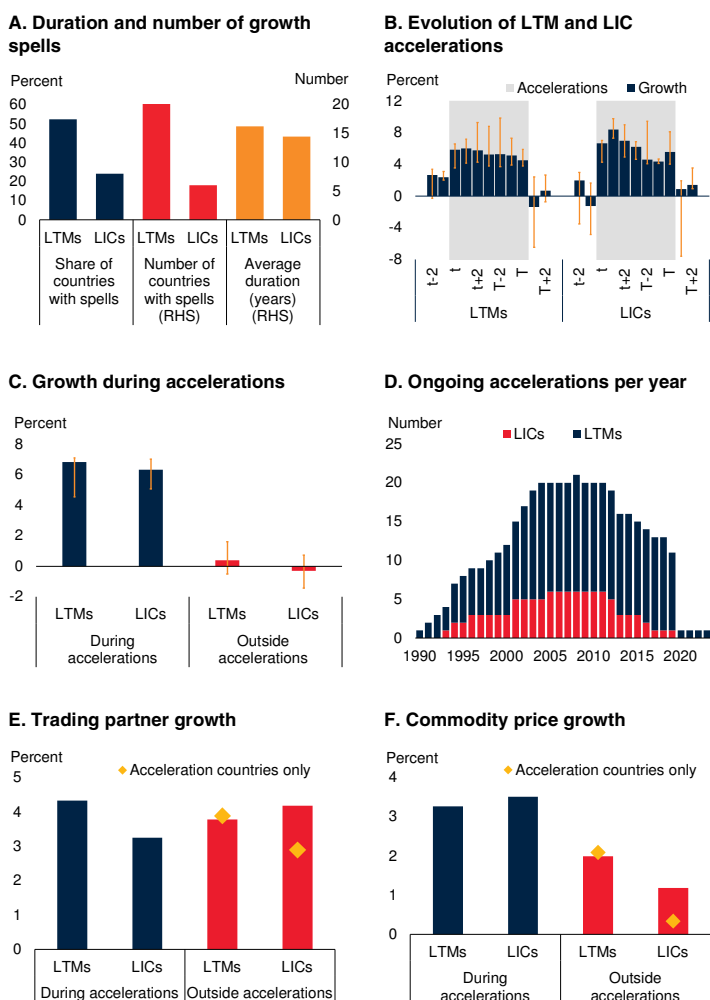
**Small number of growth accelerations in today's LICs.** Growth accelerations have been rarer in LICs than in other EMDEs, having taken root in one in four of today's LICs since 1990, compared with one in two LTMs and other EMDEs. Between 1990 and 2023, growth accelerations were recorded in 6 out of 25 LICs for which data are available (Ethiopia, Mali, Mozambique, Rwanda, Chad, and Uganda) while occurring in 22 out of 42 LTMs and 43 out of 87 other EMDEs (figure 4.7.A). In total, 30 growth accelerations have occurred in LTMs and current LICs since 1990, with Indonesia and Mali each experiencing two accelerations over this period. Of these, 26 commenced while countries were classified as LICs, with 19 of those in current LTMs and seven in current LICs.

**Accelerations last for many years.** Spells of accelerated growth have, on average, tended to last more than 16 years in LTMs and about 14.5 years in current LICs. These spells generally commence and conclude in a distinct manner, with per capita growth rates during spells dramatically exceeding those in other years (figure 4.7B). Among LTMs, annual per capita growth averaged 6.8 percent during accelerations—sharply higher than the 0.4 percent growth experienced in other years (figure 4.7C). Similarly, annual per capita growth in LICs averaged 6.3 percent during growth spells, while incomes contracted by 0.3 percent annually in the years outside of accelerations.<sup>9</sup> Such contrasting growth rates, combined with the length of spells, imply that almost all progress in raising incomes

<sup>9</sup>Years outside of accelerations often include periods of sharp contractions. Excluding contractions—to reflect normal times—growth outside of accelerations averaged 3.3 percent and 3.5 percent in LTMs and LICs, respectively.

### FIGURE 4.7 Features of growth accelerations

Growth accelerations have been more prevalent among LTMs than LICs. The typical growth acceleration has lasted 16 years in LTMs and 14.5 years in LICs, often exhibiting a distinct onset and ending. Average per capita growth exceeds 6 percent per year during these episodes. The COVID-19 pandemic brought all but one ongoing acceleration to an abrupt end. A favorable external environment can help support accelerations, with LIC growth spells in particular occurring in tandem with commodity price pickups.



Sources: Gootjes et al. 2024; International Monetary Fund; WDI (database); World Bank.

Note: LICs = low-income countries; LTMs = LICs turned into middle-income countries.

A. Based on up to 41 LTMs and 25 LICs.

B. Bars represent average per capita growth; whiskers represent the 20th to 80th percentiles. LTM sample includes 38 countries and 19 accelerations. Indonesia experienced two accelerations. LIC sample includes 21 countries and seven accelerations. Mali experienced two accelerations.

C. Sample includes 19 LTM accelerations and seven LIC accelerations. Whiskers represent the 20th to 80th percentiles. "T" is the first year of an identified growth acceleration, and "T" is the final year.

D. LTMs sample includes 19 growth accelerations; LIC sample includes 7 growth accelerations. The number of accelerations beyond 2016 may be low because as it does not include new accelerations—a minimum of eight years of growth data is required to identify the start of an acceleration.

E. Bars reflect average growth in real GDP of each country's top 10 trading partner economies, weighted by average export shares from 2000–19. Diamonds reflect the average in years outside of growth accelerations for those LTMs and LICs that had experienced accelerations.

F. Bars reflect average real growth in country-specific commodity export price indices. An individual commodity's weight reflects the ratio of that commodity's exports to the country's total commodity exports. Diamonds reflect the average in years outside of growth accelerations for those LTMs and LICs that had experienced accelerations.

and powering structural transformation occurs during accelerations. In the average growth acceleration, LTM incomes almost tripled—increasing 192 percent—while LIC incomes rose 142 percent.

**Many LTM graduations were aided by accelerations.** By the mid-1990s, per capita incomes among the 19 LTMs that were either in a growth acceleration or would enter one in the next 30 years, were on average 29 percent below those of LTMs that would not subsequently experience a growth acceleration. Per capita income in the LTMs that were in, or set to undergo, a growth spell was therefore much further from the graduation threshold, with an average gap of 42 percent compared to 17 percent in the other LTMs. However, by 2010, growth spells had propelled incomes in LTMs with accelerations to 23 percent above those without them.

**Accelerations raised current LICs' prospects of graduation.** Per capita incomes have increased to relatively close to the graduation threshold among the six current LICs that have experienced growth accelerations since 1990 (Ethiopia, Chad, Mali, Mozambique, Rwanda, Uganda). On average, per capita incomes in these LICs were 71 percent below the threshold in the year preceding their growth spell's commencement. By the final year of the acceleration, the gap between incomes and the graduation threshold had narrowed by around 48 percentage points to 23 percent. The average gap to graduation in these LICs has since widened slightly, but it remains considerably smaller than the 42 percent average gap for other LICs.

**The external environment has played an important role in growth accelerations.** The pattern of low-income accelerations suggests that global growth and commodity prices play important roles seeding accelerations. In the early 1990s, a period of weak global growth, there were no accelerations underway in today's LICs and just a few in LTMs (figure 4.7D). As global growth picked up in the late 1990s, so did accelerations. During the 2000s—characterized until 2009 by robust global growth and rising commodity prices—saw low-income accelerations proliferate, with 21 ongoing in 2008, albeit disproportionately in LTMs. Compared to LTMs,

however, accelerations in today's LICs appear to have aligned more closely with past commodity cycles than with growth cycles in their trading partners (figures 4.7E and 4.7F). Of six LICs that experienced growth spells, three (Chad, Mali, Mozambique) are industrial commodity exporters whose accelerations encompassed the commodity price upswing from 2004 to 2011. Accelerations fell away over the 2010s, especially in today's LICs, amid commodity price declines and decelerating global activity. That said, until the extraordinary shock of the COVID-19 pandemic, accelerations were notably persistent, suggesting favorable global developments can be conducive, but should not be seen as determinative relative to domestic factors.

**Accelerations often ended amid crises.** Several growth accelerations became casualties of the global financial crisis, partly reflecting slower trading partner growth (Armenia, Azerbaijan), as well as the eventual collapse in oil and other commodity prices in the mid-2010s (Chad, Nigeria). A debt crisis in Mozambique ended its growth spell in 2016. By 2019, there were only 11 ongoing accelerations, of which 10 were in LTMs. All but one of these was cut short in 2020 as the COVID-19 pandemic brought economic activity to a standstill and generated a wave of debt-related stress in vulnerable LTMs and LICs. The growth spell in Bangladesh was not upended by the pandemic and was still ongoing at the last data point in 2023.<sup>10</sup>

### Macroeconomic and development correlates of growth accelerations

Growth accelerations in LICs have corresponded with rapid improvements in a broad range of macroeconomic and development indicators. In some cases, for example with respect to investment-to-GDP ratios, there are clear theoretical reasons to view these correlates as drivers of accelerations. Other structural correlates—such as trade openness and the sectoral reallocation of

labor—are likely to be both outcomes and drivers of accelerations, because while initial improvements in these factors may reflect growth-conducive policy shifts, progress in these regards can also generate a virtuous cycle that helps raise incomes and sustain accelerations. Finally, there are correlates, such as poverty reduction, that are critical for human welfare and economic resilience, but which are likely more properly seen as outcomes of accelerations.

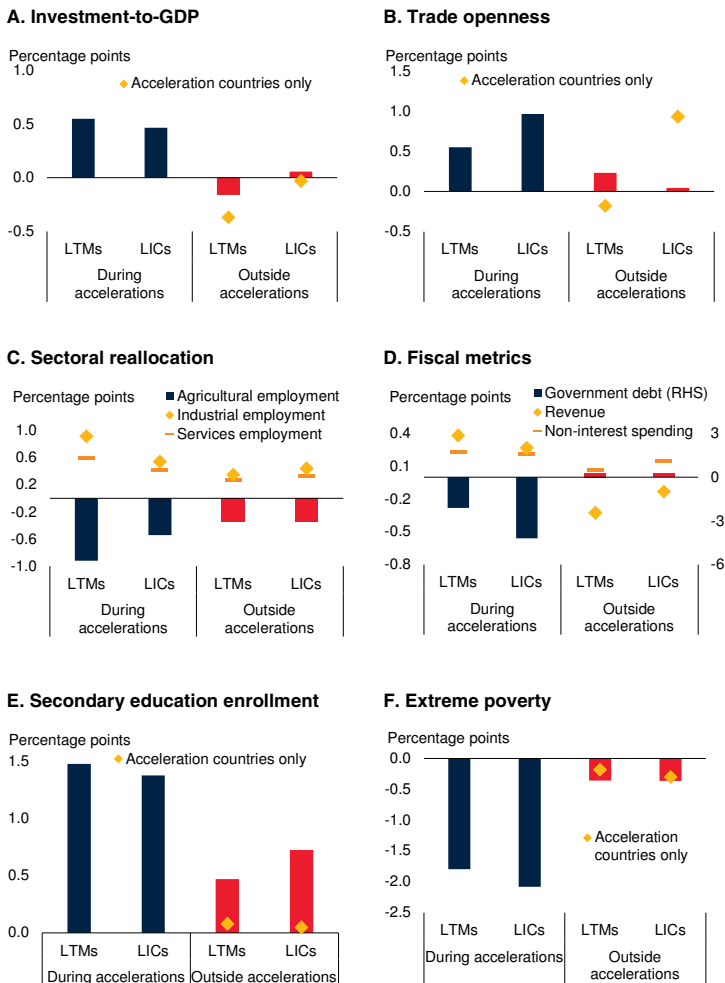
**Investment.** During growth spells, investment-to-GDP ratios rose at an average of 0.5 percentage point per year in LTMs, compared to an average decline of 0.2 percentage point in other years (figure 4.8A). Among LICs, the investment ratio increased at a broadly similar pace during accelerations, while barely changing outside of accelerations. The cumulative increase in the investment-to-GDP ratio over an average growth spell was 8.9 percentage points in LTMs, and 6.7 percentage points in LICs—a marked increase in the investment intensity of output. The associated capital deepening in both LTMs and LICs would have lifted potential growth in these economies, likely helping to sustain long accelerations (Kose and Ohnsorge, 2024; World Bank 2024e).

**Trade.** Historically, increased trade has played a critical role in lifting productivity growth as trade facilitates the transfer of knowledge and other resources across countries. Empirical estimates suggest per capita incomes rise 0.2 percent for every percentage point rise in the trade-to-GDP ratio (World Bank 2020a). Trade in goods—defined as the ratio of the sum of merchandise exports and imports to GDP—rose 0.6 percentage point per year, on average, during LTM growth spells. In other years, the trade ratio among LTMs rose at less than half this pace (figure 4.8B). During LIC growth spells, trade growth was substantially faster than outside accelerations, with the goods trade ratio rising 1 percentage point per year compared to stagnant ratios otherwise. While increased dynamism from trade-intensive growth has likely helped sustain accelerations, trade-supporting reforms—including the removal of formal trade barriers and exchange rate reforms—have also often preceded accelerations entered at very low-income levels (see box 4.1).

<sup>10</sup>Although Bangladesh's real GDP growth rate remained positive, it slowed significantly — by 4.5 percentage points to 3.4 percent in FY2020. It gained momentum in the next two years, reaching 7.1 percent in FY2022, but then slowed again in FY2023 and FY2024 (World Bank 2024).

## FIGURE 4.8 Correlates of growth accelerations

Growth accelerations are associated with sharp pickups in investment and greater trade openness. During such spells, the pace at which labor reallocates from agriculture to services and industry quickens, with industry gaining a larger share of workers in LTMs than in LICs. Fiscal positions improve, while growth in secondary school enrollment rates triples in LTMs and doubles in LICs. Significant strides in reducing extreme poverty have been made during spells of accelerated growth.



Sources: Gootjes et al. 2024; WEO (database); International Monetary Fund; WDI (database); World Bank.

Note: LICs = low-income countries. LTMs = LICs turned into middle income countries. Bars represent averages; whiskers represent the interquartile range. Sample includes 38 LTMs and 20 LICs. Diamonds reflect the average in years not outside of growth accelerations for those LTMs and LICs that had experienced accelerations.

A. Bars represent the average annual change in the investment-to-GDP ratios.

B. Trade openness is defined as the sum of merchandise exports and imports divided by GDP, all in current U.S. dollars. Bars represent the average annual change in the ratio.

C. Bars and markers represent the average annual change in the ratio of sectoral employment to total employment.

D. Bars represent the average change in the ratio of government debt to GDP. Diamonds represent the average annual change in the revenue-to-GDP ratio. Dashes represent the average annual change in the ratio of government spending (excluding interest payments) to GDP.

E. Annual change in gross secondary enrollment rate. Sample includes 35 LTMs and 20 LICs.

F. Annual change in the ratio of extreme poor to the total population.

**Sectoral reallocation.** The reallocation of labor to more productive sectors that occurs during structural transformation provides a boon to economy-wide output per worker and per capita incomes (World Bank 2024e). This process—which can be kickstarted by growth-enabling reforms, but also generates a virtuous cycle that sustains rapid growth—has been particularly striking during growth accelerations, especially among LTMs (figure 4.8C). During the average LTM growth spell, the share of labor devoted to agriculture declined by 0.9 percentage point per year—more than double the pace in other years. Two-thirds of the labor shifting away from agriculture was absorbed by services and the remaining third by industry. In LICs, the agricultural labor share declined by 0.5 percentage point per year, on average, during growth spells, with three quarters of freed-up labor shifting to services and the remainder to industry. A relatively slower pace of sectoral reallocation in LICs may reflect low starting points for agricultural productivity, with more gains required before surplus labor results.

**Fiscal positions.** Government debt ratios have declined markedly during growth accelerations, with debt falling 2.1 and 4.2 percentage points per year, on average, in LTMs and LICs respectively (figure 4.8D). In years outside of accelerations, the debt ratio has increased 0.2 percentage point annually in both groups. While improving debt ratios are a natural consequence of an extended period of above-trend growth, the attendant increase in revenues also allow governments to increase non-interest spending which, when judiciously allocated to areas such as education and infrastructure investment, should help further perpetuate accelerations. In some instances, fiscal reforms efforts may have also generated initial growth impetus preceding the start of an acceleration, including by helping to curtail debt risks and increases the chances of an investment acceleration taking root (World Bank 2024e).

**Education.** Measures of human capital development correlate strongly with growth accelerations. Outside of growth spells, secondary school enrollment rates have increased by 0.4 and 0.7 percentage point per year in LTMs and current

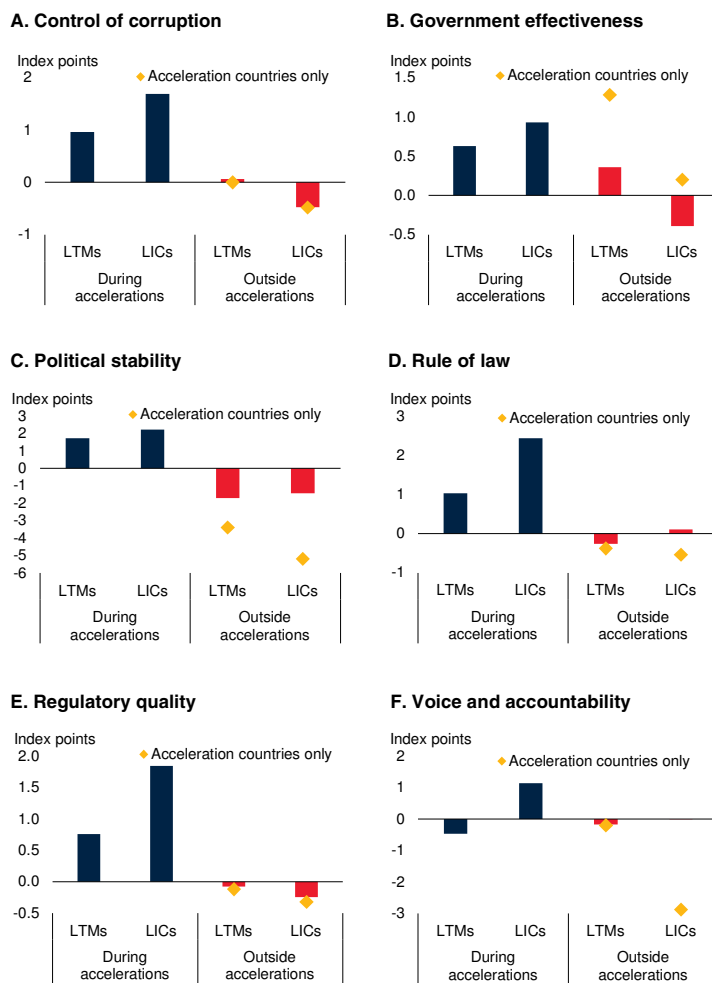
LICs, respectively; however, during growth accelerations, enrollment rates rise by between 1.4 and 1.5 percentage points per year, on average (figure 4.8E). This implies that over an entire average growth spell, secondary enrollment rates would rise by 24 percentage points in LTMs and 20 percentage points in LICs. Rapid advances in education enrollment during growth spells likely reflect both the greater availability of fiscal resources for education and more families able to support children through school. Among current LICs, where government spending on education has averaged 3.2 percent of GDP since 2000, this ratio has risen by between 0.1 and 0.2 percentage point per year during growth spells and stagnated otherwise. Although improved secondary school enrollment rates are likely to yield economic gains only with a sizeable lag, the average growth spell is long enough that human capital improvements early in an acceleration can yield growth dividends before the acceleration ends. This may help extend accelerations.

**Extreme poverty.** Rapid declines in poverty rates are a critical development outcome of periods of accelerated growth. During growth spells, extreme poverty rates—the share of the population living on less than \$2.15 per day—in LTMs declined by an estimated 1.8 percentage point per year (figure 4.8F). In LICs, estimated extreme poverty rates fell by 2.1 percentage points per year. In other years, poverty reduction has been slow, with rates falling 0.4 percentage point per year in both LTMs and current LICs. Extreme poverty rates in today’s LICs that underwent growth spells average 32 percent—14 percentage points lower than the 46 percent average poverty rate in those LICs that missed out on growth accelerations.

**Governance.** Indicators of governance quality tend to improve sharply during growth accelerations. In contrast, generally, and in today’s LICs especially, institutional quality stagnates or declines outside accelerations (figure 4.9A-F). These patterns suggest synergies between stronger growth and better governance. On one hand, peace and a baseline level of political stability is essential for other drivers of growth to operate, and strong institutions are likely to help sustain much needed reform momentum. On the other,

**FIGURE 4.9 Governance and growth accelerations**

*Improved governance coincides with growth accelerations in both LTMs and LICs. This is reflected in better control of corruption, more effective governments, greater political stability along with reduced incidence of violence or terrorism, enhanced rule of law, and improved quality of regulations. Voice and accountability improves during growth spells in LICs, but not in LTMs—partly due to eroding accountability in the later years of some growth spells.*



Sources: Gootjes et al. 2024; WGI (database); World Bank.  
 Note: LICs = low-income countries; LTMs = LICs-turned-into middle-income countries. Bars reflect average annual changes in WGI estimates (z-scores) that have been multiplied by 100 for readability. Diamonds reflect the average in years not outside of growth accelerations for those LTMs and LICs that had experienced accelerations. Sample includes 38 LTMs and 20 LICs. LTMs excludes Indonesia’s first acceleration; LICs excludes Mali’s second acceleration.  
 A. Control of corruption reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by elites and private interests.  
 B. Government effectiveness reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies.  
 C. “Political stability” reflects both political stability and the absence of violence or terrorism. The category measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.  
 D. Rule of law reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.  
 E. Regulatory quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.  
 F. Voice and accountability captures perceptions of the extent to which a country’s citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

large institutional gains do not appear necessary to initially enter an acceleration, with subsequent institutional improvement partly enabled by the social dividends of strong growth.

- *Corruption:* Growth accelerations and improvements in measures of corruption tend to go hand-in-hand. During growth accelerations, control of corruption improves markedly, particularly among LICs. Outside of growth spells, however, it remains stagnant in LTMs and worsens in LICs.
- *Government effectiveness:* Governments tend to become more effective during growth accelerations, likely reflecting greater funding of public services, infrastructure, and administrative capacity afforded by increased fiscal revenues.
- *Political stability:* Improvements in political stability and the absence of violence and terrorism during LTM and LIC growth accelerations underscore that peace and stability enable growth. Deteriorating political stability is strongly associated with periods of low growth.
- *Rule of law:* The rule of law also strengthens during growth spells—particularly in LICs—likely because governments can devote more resources to law enforcement, while improved incomes and opportunities reduce incentives for criminal activities.
- *Regulatory quality:* Regulatory quality improves during LTM and LIC growth spells, with no marked changes in other years. A well calibrated and competently enforced regulatory framework helps improve the business environment and attract foreign investment.
- *Voice and accountability:* Voice and accountability has improved only during LIC growth spells; it deteriorated somewhat during growth accelerations in LTMs. The worsening among LTMs partly reflects eroding accountability in the latter years of some growth spells.

The accelerations previously discussed all started in countries that were then low-income. However, many were in countries that have long been

materially richer than today's LICs—with generally greater levels of human and physical capital and stronger institutions. A fuller understanding of the conditions that could catalyze transformative growth in today's LICs therefore requires delving into a small subset of accelerations—those entered by countries that were, at the time, comfortably within the income distribution of today's LICs.

There are not enough such examples to permit robust statistical analysis, but narrative case studies—as presented in box 4.1—offer important insights. First, sustained strong growth requires peace and a political environment stable enough to foster long-term investment. Encouragingly, in countries with histories of intense conflict, accelerations have sometimes taken root relatively quickly after peace was achieved. Second, rapid investment growth, which can be achieved under a diversity of policy frameworks, tends to yield large dividends in low-income contexts. Third, accelerations were often preceded by reforms that bolstered private sector competitiveness and market incentives. These have included eliminating price controls, curbing the influence of state-owned enterprises, and reforming exchange rate policies. Fourth, continued reform momentum to foster macroeconomic stability and improve conditions for private enterprise helps sustain accelerated growth, especially when backed by a relatively capable public sector.

## Challenges to growth and graduation

Following 15 years of intense adversity, many LICs are at risk of further lost decades. The scarring from crises in recent years has compounded pre-existing structural challenges. LICs require substantial investment to accelerate growth and transformation. However, alongside declining growth rates, fiscal positions have deteriorated sharply, limiting available resources (Mawejje 2024a). These challenges are exacerbated by a range of worsening risks that complicate development pathways, including elevated levels of fragility and conflict, advancing climate change, and stalling structural transformation. Moreover, these trends are playing out against a backdrop of a more challenging external environment—one

that is characterized by weakening long-term global growth prospects, growing trade restrictions, trade policy fragmentation, and a resurgence of protectionist measures.

### Fragility and conflict

Since 2000, years of intense armed conflict—defined as more than 50 battle-related deaths per million people—have been far more common in LICs than elsewhere. Just eight LICs—about one-third—have avoided such conflicts entirely. This compares to more than 90 percent of other EMDEs and more than 80 percent of LTMs. The chance of being in intense conflict in any year during 2000–22, at 16 percent, was 14 times higher in LICs than LTMs (figure 10A). Conflicts have also been more deadly in LICs. Total battle-related deaths in LICs averaged close to 1,400 per million people in 2000–22, more than 20 times the level in other EMDEs. Moreover, civil conflict has increased in LICs since 2010, coinciding with stalling poverty reduction.

Set against a backdrop of heightened geopolitical tensions globally, recent instability and military coups in Burkina Faso, Mali, Niger, and Sudan, and an attempted coup in the Democratic Republic of Congo suggest conflict-related challenges may persist. If they do, graduation prospects will become bleaker. Intense armed conflicts destroy physical and human capital, often generating deep recessions and large persistent output losses (Federle et al. 2024). Conflicts also have severe spillovers, reducing trade flows and weakening private investment in adjacent states (Abdel-Latif et al. 2024; Rauschendorfer and Shepherd 2022). Neighboring countries can be destabilized and become susceptible to conflict themselves (Buhaug and Gleditsch 2008). Higher spending on defense and peace operations often comes at the expense of investment in priority sectors, including education, health, and infrastructure, and heightens fiscal vulnerabilities (Abdel-Latif et al. 2024; Ezeoha et al. 2023).

Economic damages from conflicts in LICs are often enormous. Recent empirical estimates indicate that severe conflicts in LICs are likely to lower GDP per capita by around 15 percent after five years (figure 10B). Some cases can be more

extreme. Had there been no conflict, GDP per capita in South Sudan might be as much as three times higher (Mawejje and McSharry 2021). Recent estimates suggest a potentially similar scale of per capita output losses in Yemen (World Bank 2024f). Principally, output tends to decline due to collapsing private consumption, indicating especially severe welfare effects. Outsized declines in consumption partly reflect that LIC residents have few assets and limited access to credit to smooth these shocks. Conflict also interacts with existing fragility in pernicious ways, such as by undermining already weak institutions and worsening food insecurity—hunger due to conflict is estimated to have nearly doubled between 2018 and 2023 (Chami, Espinoza, and Montiel 2021; FSIN and FNAFC 2024).

### Climate change

As climate change has advanced, the frequency and severity of extreme weather events and other natural disasters have intensified in recent decades (Konisky et al., 2016). Natural disasters have become more common in both LICs and LTMs, but the geographical incidence of disasters—especially droughts—is much greater in LICs (figure 4.10C). The social and economic consequences of disasters are more likely to tip LICs than higher-income economies into economic distress (Mejia et al. 2019). Climate change effects on labor productivity are higher in LICs than in other countries. The median loss of productivity through 2050 could be as high as 6.2 percent in LICs, higher than in lower-middle-income countries (5.7 percent), upper middle-income countries (1.5 percent), and high-income countries (0.2 percent; World Bank 2024g).<sup>11</sup> LICs with limited financial buffers could experience more adverse effects of climate-change-related disasters on economic stability and growth. With average annual economic losses estimated at 2 percent and adaptation costs estimated at 3.5 percent of GDP, the costs of climate change are higher in LICs than in other EMDEs (Mawejje 2024a).

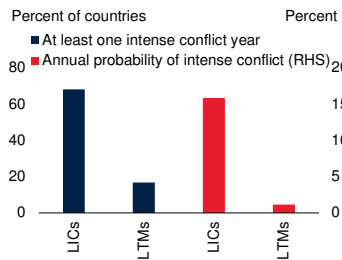
The effects of drought have been growing in frequency and geographic spread, with large

<sup>11</sup> These estimates indicate a pessimistic climate scenario.

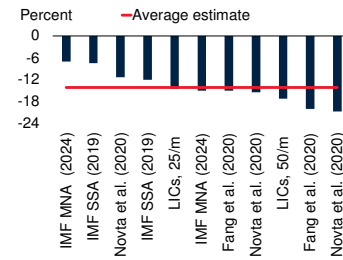
## FIGURE 4.10 Challenges to growth and graduation in LICs

Intense conflict is far more prevalent in LICs than in LTMs or other EMDEs. In this century, only one third of LICs have completely avoided intense conflict. The costs of intense conflict are severe, with per capita GDP generally estimated to be about 15 percent lower after five years. LICs are also more likely to experience extreme climate events—especially droughts—than are LTMs. Fiscal space has narrowed significantly in LICs with more than half in, or at risk of, debt distress.

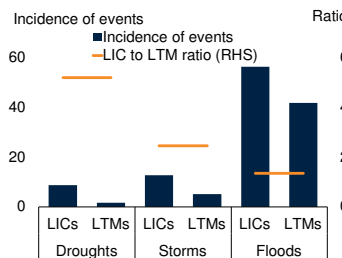
### A. Prevalence of intense conflict, 2000-22



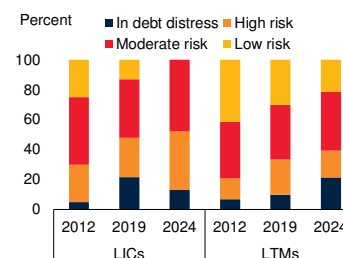
### B. Effect of intense conflict in EMDEs on GDP per capita after 5 years



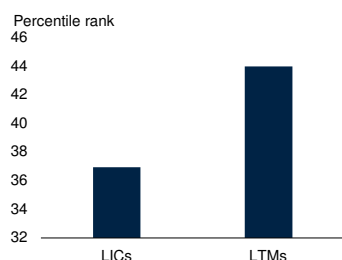
### C. Extreme climate events



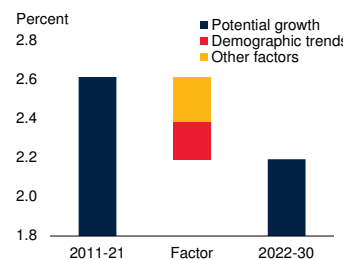
### D. Countries in, or at risk of, debt distress



### E. External market potential



### F. World potential growth



Sources: EM-DAT (database); Fang et al (2020); IMF (2019); IMF (2024b); International Monetary Fund; Kose and Ohnsorge (2024); Novta and Pugacheva (2021); Uppsala Conflict Data Program; World Bank.

Note: LICs = low-income countries; LTMs = LICs turned into middle-income countries.

A. Intense conflict years defined as those with more than 50 battle-related deaths per million people.

B. All estimates are of the decline in GDP per capita in year t+5, when year t is the onset of intense conflict. Approaches include: local projections; pre-conflict forecast versus outcome; and synthetic control. Where more than one estimate appears from a single publication, this reflects different estimation techniques or country group estimates. All estimates use the "deaths per million" threshold to define intense conflict, ranging from 25/million to 50/million. "LICs 50/m" and "LICs 25/m" are new estimates for current LICs only, based on data from 1990-2022. See Annex 3 for details.

C. Incidence of events is defined as the total number of events per million square kilometers of country area between January 2000 and May 2024, multiplied by one million for readability.

D. Shares of countries by risk of debt distress, as of Sep 2024. Based on up to 23 LICs and 30 LTMs.

E. External market potential as a measure of trade costs is defined as GDP for all other countries divided by distance between the home country and other countries. The elasticity of the distance effect is assumed at -1.4 (see Carrere et al., 2013). Distances are measured based on capital cities.

F. Based on the production function approach. GDP-weighted averages for a sample of 29 advanced economies and 53 EMDEs. See Kose and Ohnsorge (2024) for details.

economic losses in low- and middle-income countries. Compared to normal conditions, drought can reduce growth, on average, by as much as 0.85 percentage points in developing countries, compared with 0.3 percentage point in advanced economies (Zaveri, Damania, and Engle 2023). Because agriculture accounts for such a sizeable share of economic activity in LICs the effects of climate change could be especially severe (Jafino et al., 2020; Adedeji, Gieck-Bricco, and Kehayova 2016). Climate-related destruction of crops and livelihoods could push many LIC populations further into poverty, which would be aggravated by the limited capacity and resources of LICs to counter the adverse effects of climate change (Hallegatte et al. 2016). Recoveries from droughts appear to be taking longer, resulting in less time for livelihoods to be restored between droughts, which renders countries even more vulnerable to shocks of all varieties (Schwalm et al. 2017).

Droughts can impact economies in other ways other than through their effects on agriculture. They can, for example, exacerbate existing vulnerabilities in the business environment, such as by compromising the provision of electricity from hydropower generation. This, in turn, can have severely negative implications for output and productivity in services and manufacturing sectors (Falchetta et al. 2019; Mawejje 2024b).

## Fiscal vulnerabilities

Fiscal positions are weaker and have deteriorated more rapidly in LICs than in LTMs. LICs entered the 2020 pandemic-caused recession with inadequate fiscal buffers, which, because of their limited market access, made it harder for LICs than LTMs to undertake countercyclical fiscal policy. Since the pandemic, the debt build-up has been faster and more widespread in LICs than in LTMs, so that in 2024, more than half of LICs are either in debt distress or at high risk of it (figure 4.10D). In addition to increasing their debt ratios, LICs have increased the riskiness of their financing sources. In the decade before the pandemic, non-Paris Club creditors became a more important source of financing, especially in Sub-Saharan Africa (Horn et al. 2023; Mihalyi and Trebesch 2023).



Higher levels of public debt and an increased reliance on riskier sources of financing make many LICs vulnerable to currency, interest rate, and refinancing risks (Essl et al. 2019). Rising debt and interest rates have resulted in a sharp increase in interest payments. In 2023, interest payments in the average LIC exceeded 10 percent of revenue, reaching their highest level in two decades (Mawejje 2024a). In six LICs, government interest payments were higher in 2021 (the latest available data) than spending on health services. Thus, servicing large debt loads is significantly reducing the resources available to invest in growth-enhancing sectors, including in health, education, infrastructure, and climate adaptation.

### Geography

Nearly half of LICs today are landlocked, compared to about a quarter of LTMs. Moreover, more than half of today's landlocked LICs are in fragility and conflict-affected situations, and their neighbors are generally other LICs or countries with per capita incomes just above middle-income thresholds. This geographical disadvantage—often exacerbated by high trade costs and behind-the-border non-tariff barriers—limits LICs' ability to catalyze stronger growth by encouraging trade with large trading partner economies (figure 4.10E; Arvis et al. 2013; Paudel and Cooray 2018). By contrast, among the landlocked LTMs, about half border China, Russia, or both. In many cases, opportunities created via trading relationships with a large and globally connected neighbors—for example through supplying commodities, integrating with regional value chains, or receiving remittances from migrant workers—were integral to attaining middle-income status (Steinbach 2019).

### Declining productivity

The broad-based decline in LIC labor productivity since 2010 implies serious obstacles to medium-term growth. In many LICs, productivity across sectors is held back by poor business environments characterized by inadequate provision of public capital, lack of access to finance, political instability, conflict, and policy uncertainty (Bah and Fang 2015; Dabla-Norris, Ho, and Kyobe 2016). In addition, agricultural productivi-

ty has been constrained by limited adoption of technology and by climate-related vulnerabilities (World Bank 2008a; Wiggins 2014). High unit labor costs present an obstacle to manufacturing sectors in Sub-Saharan Africa, limiting industrial investment and export growth (Naidoo and Ndikumana 2023; Gelb et al., 2020). Indeed, in Africa, shares of manufacturing in GDP and total employment have declined notably since the 1990s (Balchin et al., 2016). Though workers continue to transition out of agriculture and into services, initial gains in services productivity in the 2000s appear to have lost momentum. This suggests that, because there are few dynamic labor-absorbing industries, the marginal worker is taking up informal low-productivity service work (Fox et al. 2013). As a result, the recent reallocation of resources may have contributed little to aggregate growth in most African economies (Vries, Timmer, and Vries 2013).

The experience of LICs today is consistent with structural change without industrialization, which may have been growth-reducing in some cases (McMillan and Rodrik 2011; Carmignani and Mandeville 2014). These patterns may reflect broader global forces that are driving trends of premature deindustrialization (Rodrik 2016). With the technological frontier in manufacturing moving ever forward, opportunities to compete in global product markets by substituting comparatively cheap labor and land for technological sophistication may be narrowing (Rodrik and Sandhu 2024). In this context, there could be an emerging trade-off between rapidly increasing manufacturing employment and fostering internationally competitive manufacturing firms, meaning that transitioning workers into manufacturing offers no guarantee of productivity convergence (Herrendorf, Rogerson and Valentinyi 2022; Diao et al. 2024). That said, there is also some evidence that relatively low-tech manufacturing firms in Sub-Saharan Africa can outperform on productivity metrics when controlling for wider business environment challenges (Harrison, Lin, and Xu 2014).

### More challenging external environment

Many LTM graduations, in the 2000s, occurred when there was relatively strong global growth,

characterized by a surge in the demand for commodity resources in some large EMDEs. China's unprecedented growth spurt provided demand for commodities, supporting growth in commodity-dependent EMDEs. However, long-term prospects for commodity demand are weakening as growth in China—the largest source of commodity demand—slows and shifts towards less-resource-intensive sectors (World Bank 2018a).

In addition, LTMs benefitted from globalization and greater integration into global value chains by entering into free trade agreements (Steinbach 2019). However, global trade growth has slowed significantly since the global financial crisis and recent overlapping shocks have further disrupted commodity markets and supply chains (Ohnsorge and Quaglietti 2023; World Bank 2024c). A resurgence of trade-restrictive measures, trade policy fragmentation, or moves toward protectionist measures could weaken global trade dynamism further and limit opportunities for LICs to trade more with the rest of the world (World Bank 2024c). Global potential growth is also projected to fall to a three-decade low of 2.2 percent over the remainder of the 2020s—0.4 percentage point below the average from 2011–21 and continuing a secular deceleration as fundamental drivers are set to weaken further (figure 4.10F; Kose and Ohnsorge 2024).

## Growth opportunities

Enabled by conducive reform efforts, stronger institutions, and greater peace and stability, LICs could take advantage of a range of opportunities linked to their existing characteristics to accelerate growth and development. If effectively harnessed, demographic dividends and natural resource endowments could drive economic growth and transformation, enabling rapid progress. LICs could also accelerate growth by advancing regional trade integration and building up potential export sectors where they have natural advantages, including tourism.

### Potential demographic dividends

LICs can reap substantial demographic dividends as the share of their working-age population grows significantly over the next half-century (figure

4.11A). Although steadily declining, fertility rates remain high in LICs, with an annual average of five births per 1,000 people during 2000–21, compared to four births in LTMs, and 3 in other EMDEs. By contrast, the working-age share of the population has been decreasing in advanced economies for more than a decade. The expected growth in LIC working-age populations could have sizable economic impacts (Ahmed and Cruz 2016). As cohorts of children become working age, dependency ratios will decline, and the labor force will swell. By illustration, demographic trends in Sub-Saharan Africa, if combined with effective labor market reforms, could add an estimated 1.2 percentage points a year to potential growth between 2022 and 2030 (Kasyanenko et al. 2023).

Investing in education and skill-training and creating stronger healthcare systems will be critical to ensure greater human capital development capable of driving growth and transformation (World Bank 2018b; World Bank 2021). Beyond the increase in available labor inputs, declining dependency ratios can also foster increased domestic savings. Twinned with sufficiently efficient intermediation, higher savings can be channeled into increased investment, supporting rapid capital accumulation. However, the realization of these benefits depends on institutions, labor markets, and financial sectors of sufficient dynamism to generate productive jobs and investment opportunities (Bloom and Canning 2004; Wenjie et al. 2024).

### Globalization and trade

The involvement of LICs in global trade has declined since 2010 (figure 4.11B). As a proportion of world totals, their shares of both goods and services exports has declined since 2010, while imports flattened out and have been declining since 2015. In part, this reflects low levels of regional trade integration due to the proliferation of non-tariff barriers and weakness in LIC growth prospects—which have softened markedly since 2010. This period has also been associated with wider global trends characterized by weaker global growth, increasing global trade fragmentation, declining foreign direct investment flows, and slowing commodity demand—especially from

China. In a context of increasing trade policy uncertainty, these factors have placed large constraints on LIC trade growth and disrupted trade networks (World Bank 2024c). Increasing trade openness and participation in the region could push back against these forces and create opportunities to accelerate growth in LICs. Eliminating barriers to trade can also support wider poverty reduction objectives by lifting demand-side constraints (Goldberg and Reed 2023).

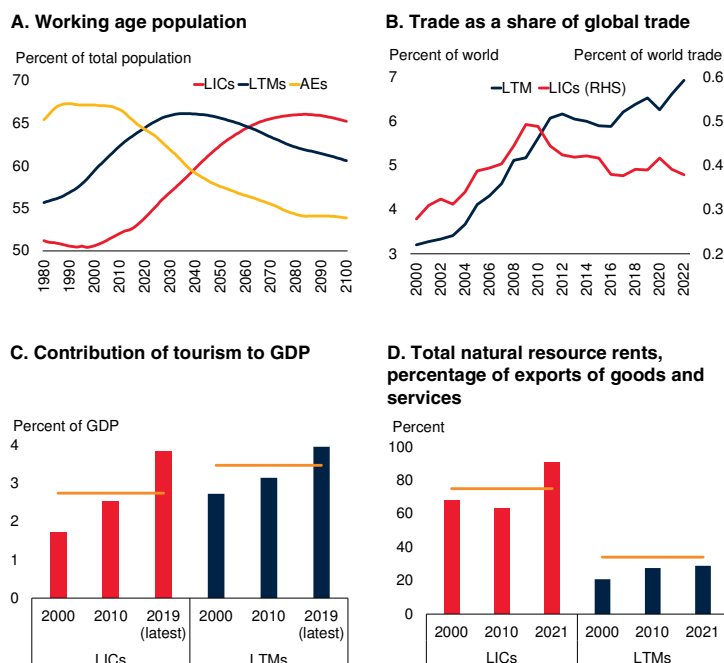
African LICs in particular have a proximate opportunity in the form of the African Continental Free Trade Area (AfCFTA). Created in 2019, the AfCFTA provides a framework for the liberalization of trade in goods and services. The agreement aims to reduce tariffs among member countries and to cover policy areas such as trade facilitation and services, as well as regulatory measures such as sanitary standards and technical barriers to trade. If fully implemented, the free trade area is expected to cover all 55 African countries, including all African LICs. Implementing the AfCFTA could raise income by 7 percent and reduce the number of people living in extreme poverty by 40 million by 2035 (World Bank 2020b).

The creation of a sizeable regional market is a major opportunity for African LICs to take advantage of economies of scale, diversify exports, and attract foreign direct investment (IMF 2020a). The prospects for integration into wider global value chains could also be considerably improved by enhancing the efficiency of intra-African trade. However, implementation of the AfCFTA has been slow, and the focus is currently on merchandise trade only. The Guided Trade Initiative launched in 2022 aims to test the policy, institutional, legal, and operational environment under the AfCFTA, with a view to facilitating commercially viable trade.<sup>12</sup> Moreover, to realize fully the potential benefits from de jure changes in trade policy, a broader suite of regulatory reforms and infrastructure investments is also necessary.

<sup>12</sup> The Guided Trade Initiative is an interim solution to kick-start meaningful trade among interested State Parties that have met the minimum requirements for commencing trade under the Agreement, to test the readiness of the private sector, and to test the operational, institutional, legal and trade policy environment under the AfCFTA.

### FIGURE 4.11 Growth opportunities in LICs

To kickstart stronger growth and improve graduation prospects, today's LICs could find advantage in youthful and growing populations, greater trade integration, tourism potential, and vast natural resource endowments.



Sources: UN World Population Prospects (database); WDI (database); World Bank.  
Note: AEs = advanced economies; LICs = low-income countries; LTMes = LICs turned into middle-income countries.  
A. Population-weighted averages. Working-age population is defined as people aged 15–64. Based on 25 LICs and 40 LTMes.  
B. Solid lines show the share of trade in global trade, by country group. Based on up to 24 LICs and 42 LTMes.  
C. International tourism receipts expressed as a percentage of GDP. Solid bars are mean values. Orange bars are the 2010–2019 period averages. Sample includes 22 LICs and 41 LTMes.  
D. The solid blue bars show simple unweighted year averages. Solid bars are mean values. Orange bars are 2010–19 period averages. Sample includes 25 LICs and 42 LTMes.

### Natural resource endowments

More than four of five of LICs today are resource dependent—several of them possess plentiful oil and gas resources and mineral deposits, and substantial solar energy and tourism potential. During 2000–2021, on average, natural resource-related income accounted for 12 percent of GDP and 76 percent of exports in LICs (figure 4.11C). Natural resource endowments present both opportunities and risks. Commodity revenues can be transformative if used efficiently for public investment. However, commodity dependence can precipitate macroeconomic management challenges related to so-called Dutch disease, corruption, and fiscal policy volatility, potentially undercutting sustained growth and poverty

reduction (Cust, Devarajan, and Mandon 2022; Katoka and Dostal 2022).

**Tourism.** Many LICs could reap significant benefits by utilizing their natural wealth to foster tourism development. Tourism can be an engine for sustainable economic growth—through job creation, enhanced inclusion, and poverty reduction (Christie et al. 2013). Some African LICs have unique biodiversity and other physical attractions that, under the right conditions, have the potential to develop into premier international destinations (for example, *Democratic Republic of Congo, Rwanda, Uganda*). The contribution of tourism to GDP has increased, on average, by 2 percentage points since 2000 among LICs, compared to just 1 percentage point among LTMs (figure 4.11D). In a few LICs, the share of tourism receipts in GDP exceeded 5 percent (*Gambia, Madagascar, Rwanda*). In others, such as those in fragile and conflict situations, it barely reached one-half of a percentage point of GDP (*Burundi, Sudan, South Sudan*), highlighting the drag that conflict can have on sector specific investment and growth.

Because it is a labor-intensive sector, tourism can support jobs and livelihoods. It can also facilitate the development of new infrastructure, helping to boost investment (World Bank 2017). Tourism can be a reliable source of external demand and export growth. Some LTMs have leveraged their tourism potential to generate large economic dividends and growth (Armenia, Comoros, Georgia, Kenya, Kyrgyz Republic, Cambodia, Nepal, Solomon Islands), while Rwanda a fast-growing LIC, has prioritized tourism, among other service exports. The examples of Nepal and Rwanda—both small, landlocked, and post-conflict countries—can serve as encouraging examples of the potential of tourism to drive growth and transformation, even at low levels of development. For both countries, tourism accounted for more than one-quarter of total exports before the pandemic-spawned recession and continues to be a major export sector (World Bank 2022b; 2023a).

Reaching LICs' tourism potential will be contingent on a stable political environment, solid infrastructure, and the provision of reliable

ancillary services, which presents considerable challenges. In addition, tourism promotion, if not well calibrated for sustainability, can come with risks related to resource depletion and environmental degradation. Nevertheless, the benefits associated with tourism, such as increased employment, the deepening of local value chains, and enabling infrastructure investment, have the potential to become mutually reinforcing.

**Solar energy.** Many LICs have substantial potential for the generation of solar power that could provide a sustainable pathway to close the sizeable energy deficits in these countries (ESMAP 2020; Ndubuisi and Avenyo 2024). For example, in almost all LICs, long-term daily photovoltaic power potential averages exceed 4.5 kilowatt hours per installed kilowatt peak (kWh/kWp)—a measure of the average daily energy produced by a solar panel system per unit of peak capacity. By contrast, some large EMDEs including Brazil, China, and India are assessed as having only mid-range potential (3.4 to 4.5 kWh/kWp). At present, infrastructure shortfalls and low institutional capacity mean comparatively little solar energy is produced in LICs. However, solar-generating capacity can be installed at localized scale in a comparatively decentralized manner, utilizing mature technologies and relatively limited financing. As such, the barriers to broad adoption in LICs may be lower than for many other low-carbon energy technologies.

Appropriate policies—including those that support grid build-out, energy storage solutions and smooth import access to inputs such as solar panels and inverters—could unlock this solar potential and drive down energy costs in LICs. Africa is currently home to only about 1 percent of installed solar PV capacity. By 2030, solar energy is expected to become the dominant source of electricity in Africa, with the potential to contribute around 15-to-30 percent of the continent's total electricity generation, primarily because of its abundant solar resources and cost-effectiveness compared to other sources (IEA 2022b). In turn, lower input costs could enhance firm competitiveness and help raise living standards, while susceptibility to international energy price shocks could also be attenuated.

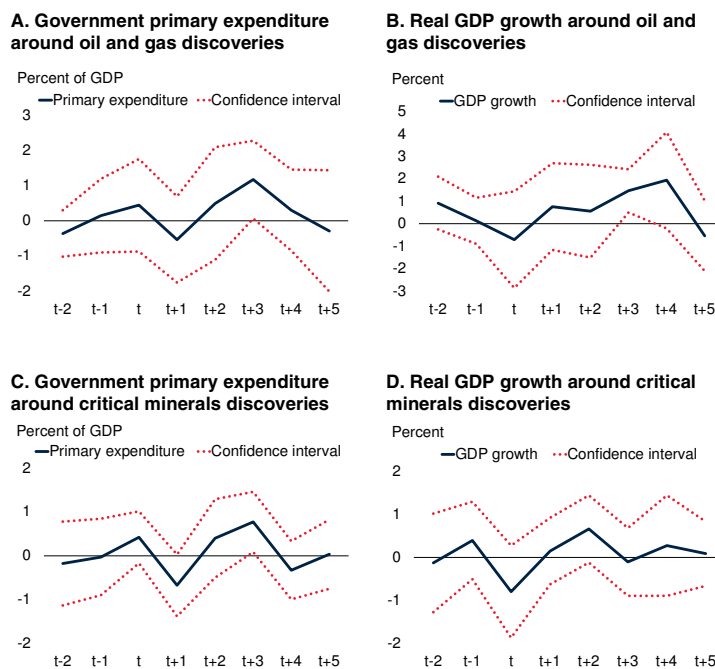
**Oil and gas resources.** Over the past few years, several low-income countries have discovered sizable oil and gas deposits. Out of 26 LICs, six have had at least one significant oil and /or gas discovery since 1980. The median net present value of the discovery for the period 1980 – 2020 was 3.9 percent of GDP among today’s LICs and 2.8 percent among LTMs. In the past, resource discoveries have supported LIC graduation to middle-income status, with surges of foreign direct investment catalyzing growth in the short run (Toews and Vézina 2017; World Bank 2015). However, countries that used natural resource wealth to achieve higher levels of development over the long term tended to have strong institutional frameworks, with growth disappointments otherwise often following resource discoveries (Cust and Mihalyi 2017). The discovery of natural resources can substantially raise public expectations. In some LICs commodity discoveries have been followed by a deterioration in fiscal positions, with increases in government expenditure, fiscal deficits, and debt (Addison and Roe 2018).

The short run effects of giant oil and gas discoveries can be investigated by observing how key macroeconomic variables evolved around such events (see annex 4.2 for methodological details). An increase in primary government expenditure follows giant oil and gas discoveries in LICs (figure 4.12A).<sup>13</sup> Oil and gas discoveries are associated with a modest and short-lived increase in LIC real GDP growth three years after the discovery (figure 4.12B). Most of the investment in the oil and gas sectors occurs with imported goods and services (Addison and Roe 2018). These results are consistent with the literature that evaluated similar short-run effects in larger samples (Arezki, Ramey, and Sheng 2017). The lead times between discovery and production in LICs can also stretch across many years, in some instances accounting for the weak and delayed short run growth impacts (Arezki, Ramey, and Sheng 2017; Khan et al. 2016). Harnessing natural resource wealth to drive economic transformation in LIC with persistent effects today will

<sup>13</sup>The study investigated impacts on primary government expenditure in a context of low-quality investment data for LICs.

**FIGURE 4.12** The evolution of key macroeconomic variables around commodity discoveries

*Oil and gas discoveries are associated with modest increases in primary government spending and real GDP growth among LICs today. Although mineral discoveries have been associated with a modest surge in primary government expenditure, the increase in real GDP growth is insignificant, suggesting an inability to exploit broad economic benefits of these natural resource endowments.*



Sources: Cust, Rivera-Ballesteros, and Mihalyi (2021); International Monetary Fund; Minex Consulting (database); World Bank.

Note: Giant oil and gas field discoveries are defined as those with estimated ultimate recovery (EUR) reserves greater than or equal to 500 million barrels of oil equivalent. Critical minerals are identified as useful in renewable energy technology following World Bank (2020e, 2023c). Four base metals are included in this list: copper, lead, nickel, and zinc.

A-D. The solid blue lines show the point estimates. The dotted red lines show the 90 percent confidence bands. The underlying panel regressions are based on 25 LICs.

likely require adjustments to structural, fiscal, and monetary policies to foster the transformation of resource rents into wealth-generating assets (Cust and Zeufack 2023).

**Base metals and minerals.** The energy transition could deliver significant economic dividends for LICs, with increased demand for metals and minerals providing new opportunities for growth and transformation (Andreonia and Avenyo 2023; IEA 2022a). The decarbonization and global energy transition requires substantial amounts of metals and minerals—including cobalt, copper, lithium, and nickel—that are critical to the generation and storage of renewable energy

(World Bank 2023b; 2020a). Some of the largest known deposits of such minerals can be found in LICs. For example, the Democratic Republic of Congo has the largest known reserves of cobalt, accounting for more than 50 percent of the world total, while Guinea boasts 24 percent of global bauxite reserves (Andreoni and Avenyo 2023). Although not currently major lithium producers, the Democratic Republic of the Congo and Mali have substantial, yet-to-be-explored lithium deposits (IMF 2024b). Overall, LICs account for more than 60 percent and 50 percent of the known global reserves of cobalt and graphite respectively – two of the minerals that are essential components in many of today’s rapidly growing clean energy technologies, but less than 3 percent of current production.

Over recent decades, mineral discoveries have been associated with an increase in primary government expenditure (figure 4.12C). However, there has not been any systematic relationship between mineral discoveries and real GDP growth (figure 4.12D). That LICs don’t experience growth spurts after giant discoveries of natural resources points to missed opportunities. Current approaches to ownership, governance, transparency, taxation, and investment are likely not configured to provide broad benefits to domestic economies (Ericsson, Löf, and Löf 2020). LICs have the opportunity, however, to better develop metals processing industries, and institute regulatory reforms to maximize the development potential of profitable resource sectors (IMF 2024b). Significant structural changes—such as diversification into downstream and more technologically enabled industries—may be necessary if LICs are to reap sustained benefits from mineral wealth (Andreonia and Avenyob 2023; Karkare and Medinilla 2023).

## Policy priorities

There are many challenges that merit urgent policy focus in LICs. However, LIC status is also synonymous with limited resources. As such, prioritization is key, as is recognition of interrelatedness of reforms. If the rate of graduation from LIC to middle-income picks up in coming decades, it will be primarily because national policy-

makers succeed in creating the conditions for growth. This is likely to require policies focused on catalyzing investment, lifting labor productivity, and improving macroeconomic resilience and governance.

Yet the how these policies are conceived and implemented across countries also will depend on widely differing circumstances that mandate tailored solutions. For countries embroiled in conflict, success in reforms will first require attaining at least relative peace and stability. For LICs in debt distress, building fiscal space is paramount. For still other LICs, curbing the volatility that can come with commodity dependence may be key. At the same time, LICs face a range of obstacles to growth the resolution of which will require increased collaboration with, and support from, the international community.

### Cross-cutting national policy priorities

**Increasing investment.** Crafting policies that support a more investment-intensive economy has historically been central to driving growth from low-income levels (World Bank 2024b). Indeed, almost all the drivers of future prosperity in LICs—including human capital development, job creation, infrastructure development, technological advances, and adaptation to climate change — will require much-increased levels of investment. At graduation, the average investment-to-GDP ratio in LTMs was about 5 percentage points higher than recent levels in LICs (figure 4.13C). While there is no single recipe to deliver rapid investment growth, the conditions that preceded previous EMDE investment accelerations can offer a useful starting point.

In the past, EMDE investment accelerations were more likely to take root when institutional quality is high, and the real exchange rate is competitive (World Bank 2024h). They were often preceded by improvements in fiscal positions and trade liberalization. The adoption or lowering of inflation targets has significantly raised the chances of entering an investment acceleration. These patterns suggest LIC governments should put high priority on bolstering macroeconomic stability, improving institutional quality, and furthering trade integration.

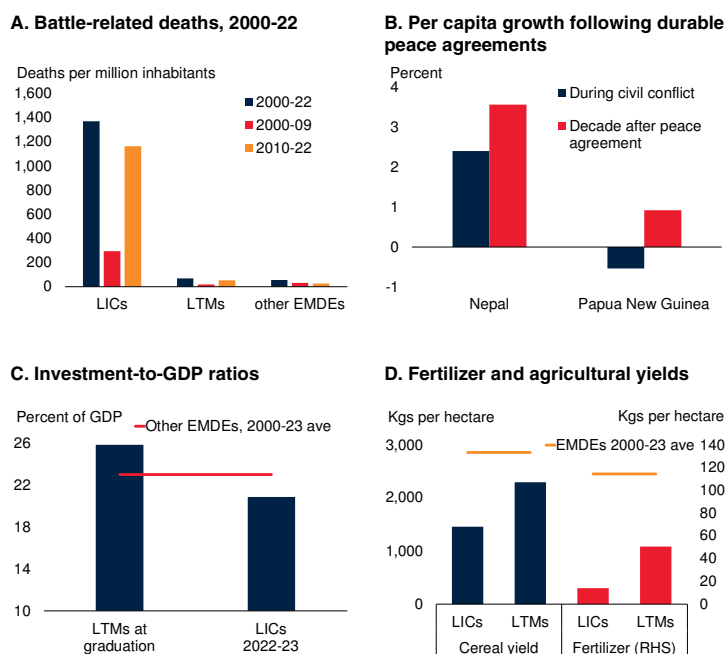
Large increases in private investment often come at the same time that public investment is rising. In part, this reflects that public goods - such as education and healthcare - can raise private investment returns. In LICs, public investment is limited by fiscal constraints, but projects with high potential returns may encourage private investment, suggesting they should be prioritized within sustainable spending envelopes (Eden and Kraay 2014). LICs can also attenuate fiscal constraints that hold back public investment by generating higher revenues through measures to broaden the tax base, increasing the efficiency of spending—including by winding down regressive subsidies—and improving debt management practices (Mawejje 2024a).

LICs could also get more from constrained public investment budgets by seeking to improve the quality of investment. The outcomes yielded by public investment can be enhanced by strengthening capacities for project identification, appraisal, preparation, implementation, monitoring, and evaluation. These pillars of public investment management can help to ensure that projects are both financially and economically viable, lowering fiscal risks and increasing the likelihood of securing anticipated economic returns (Adarov and Panizza 2024; Adarov, Clements, and Jalles 2024).

**Improving governance and institutions.** Enhancing institutions is a multi-dimensional challenge but is critical to enabling sustained improvements in living standards in LICs. Bearing down on corruption and improving security and the rule of law are necessary to improving the business environment, fostering capital formation and entrepreneurship. At the same time, gradually building public sector capacity—regarding the provision of public services and regulatory oversight, for example—can enhance the state’s perceived legitimacy, reduce policy uncertainty, and improve prospects for delivering necessary fiscal reforms. Most LICs will not establish strong institutions by international standards in the near term—and much improvement in institutions tends to occur during growth spurts, underlining the feedback loops between institutional quality and growth. Nevertheless, reversing outright

**FIGURE 4.13 National policy priorities**

*Reduced conflict is essential if development prospects in LICs are to brighten. History shows that LTMs that brought civil conflicts to a durable close experienced sustained higher growth. To upgrade growth prospects, LICs will likely need to lift investment-to-GDP ratios closer to levels in LTMs at graduation. Increased use of fertilizer could improve productivity in LIC agriculture, which remains the largest sector by employment in LICs.*



Sources: International Monetary Fund; Uppsala Conflict Data Program; WDI (database); World Bank. Note: EMDEs = emerging market and developing economies; LICs = low-income countries; LTMs = LICs turned into middle-income countries; other EMDEs = emerging market and developing economies excluding LICs.

A. Battle-related deaths per thousand people calculated as the best estimate of battle-related deaths during a time period, divided by the population in the final year of that period.  
 B. Dates for conflicts are as follows; Nepal, 1996 to 2006; Papua New Guinea, 1987-2001. Dates for the subsequent decade are: Nepal, 2007 to 2016; Papua New Guinea 2002 to 2011.  
 C. Bar for LTMs indicates the average investment-to-GDP ratio in graduation year. Where countries moved from LIC to middle-income more than once, the final graduation year is used.  
 D. Bars reflect cereal yields per hectare of harvested land, and fertilizer consumption per hectare of arable land. For LICs, data reflect the sample average in 2022; for LTMs, data reflect the sample average for the respective year of each LTM's graduation.

declines in institutional standards is essential if other growth-enhancing reforms, such as greater infrastructure investment, are to succeed (Zergawu, Walle, and Giménez-Gómez 2020).

As to specific policies, digitalizing public sector processes and data could build capacity while also facilitating improved monitoring and transparency—for example, regarding such issues—as government procurement (Santiso 2022). Fostering financial inclusion and electronic payments can help improve financial security for businesses

and lessen the use of cash for official functions, which may have the benefit of reducing bribery. Increased resources for public sector auditing can disincentivize corruption, but auditors themselves must be sufficiently independent (Olken and Pande 2012). The governance, regulatory oversight, and management incentives of state-owned enterprises merit special attention, given their roles in providing essential services and privileged closeness to governments. Enhanced legal protection for media freedoms can increase political accountability, and thereby representation, buttressing longer-term political stability.

#### **Rising productivity in agriculture and services.**

Successful structural transformation in LICs will require much-improved agricultural productivity. In addition, it is nearly certain that the services sector will remain a larger source of employment than the industrial sector for the foreseeable future, even if some LICs overcome concerns regarding premature industrialization. Policies to raise productivity in promising areas of agriculture and services sectors therefore warrant priority. Agricultural productivity-oriented reforms could include improving access to fertilizer and credit, ensuring robust land tenure rights for small farmers, and encouraging crop diversification, including through extension programs.

Fertilizer usage tends to be much lower in LICs than in other EMDEs (figure 4.13D). Given the evidence of high returns from marginal fertilizer usage in low-income settings, there is a strong case for policy intervention to encourage farmers to adopt fertilizer use (Duflo, Kremer, Robinson 2011). That said, the design of any input subsidy ought to support market development, avoid regressive outcomes, and be calibrated to institutional realities, including risks of illicit diversion. Prioritizing credit access and educational extension programs has been found to bolster the adoption of new crop varieties, which can diversify output, and boost resilience and profits (Ruzzante, Labarta, and Bilton 2021). Where property rights are weak, improving land tenure rights for farmers can incentivize investment, benefitting productivity and incomes (Lawry et al. 2017).

There are several areas of skills and infrastructure development that can help boost productivity in

services. Infrastructure to support digitalization—including affordable electricity and remote internet access—can be labor-augmenting with respect to the productivity and employment of low-skilled workers (Hjort and Tian 2014). Educational quality may be especially critical for services-led growth because employment in higher-value service sectors is likely to be more dependent on the development of transferable skills—such as ICT and linguistic skills—relative to labor-intensive manufacturing. At a broader level, policies supporting sustainable urbanization, such as the development of transportation and sanitation services, can enable urban agglomeration benefits and combat congestion costs (Grover, Lall, and Timmis 2021). Importantly, while such policies could support productivity growth in services, they can also lay the groundwork for stronger manufacturing sectors.

#### **Unlocking women’s economic potential.**

Economy-wide productivity can also be enhanced by promoting policies that address barriers to female labor force participation and women’s labor income. These can include allocating greater resources and higher priority to female education and skills development (Agte et al. 2024). Eliminating gender gaps in the labor market enables broad productivity improvements by facilitating human capital development and a more efficient allocation of talent in the economy (Hsieh et al. 2019). Such policies can support structural transformation, as well as raise total labor supply (Dinkelman and Ngai 2022). Moreover, over the longer term, the lower fertility rates that tend to come with increased female education and labor force involvement can contribute to ushering in a demographic dividend that can help to foster capital accumulation and far-reaching improvements in living standards (Wodon et al. 2020).

#### **Building resilience to macroeconomic shocks.**

Shocks in LICs are more likely to have long-term adverse consequences reflecting scarring from the knock-on implications of such issues as child malnutrition and sovereign debt distress. The interaction of external shocks with pre-existing fragility also heightens the risk of such extreme outcomes as conflict (Patcharaporn, Castrovillari, and Mineyama 2023). Policies that enhance



resilience to economic shocks are therefore key to improving growth and graduation prospects.

Economic diversification can cushion volatility related to global market fluctuations and support resilient, sustainable and inclusive growth (Deléchat et al. 2024). Credible oversight institutions and fiscal frameworks can buttress resilience by helping to build fiscal space and creditor confidence. Robust fiscal and debt management architectures reduce the chances of financial stress and enhance prospects for expeditiously resolving debt-related strains (Rivetti 2021). Fiscal rules can reduce fiscal policy volatility and the procyclicality of government spending in LICs (Dessus, Diaz-Sanchez, and Varoudakis 2016; Mawejje and Odhiambo 2024). Establishing medium-term budgeting frameworks helps make fiscal rules work and enhances transparency.

To bolster macroeconomic stability, LICs with sufficient institutional capacity can prioritize transitioning to inflation-targeting. Currently, very few LIC central banks are full inflation-targeters, although several emphasize various inflation measures to guide policy. For other LICs operating with fixed exchange ranges—some within currency unions—it is critical that pegs are commensurate with domestic productivity and backed by prudent fiscal and reserves management policies. By reducing crisis risk and uncertainty, greater macroeconomic stability should serve to attract greater private capital inflows, for example into infrastructure investment, where private participation is low.

### Context-specific national policy priorities

**Peace and stability.** For LICs in fragile and conflict situations, greater peace and stability are necessary conditions for delivering broader reforms. Conflicts can also have significant adverse spillovers to neighboring countries, which compounds aggregate human and economic costs. In LICs, conflicts are widespread—battle-related deaths since 2000 dwarf those recorded in better off countries (figure 4.13A).

The roots of armed conflict are complex and context-specific but can encompass factors such as a dearth of economic opportunities, inequality,

competition over resources—including commodity rents—and economic shocks that threaten livelihoods (Asongu and Nwachukwu 2016; Blattman and Miguel 2010; Vesco et al. 2020). As such, policies promoting inclusive growth in LICs should improve prospects for peace. For example, the benefits of climate adaptation and infrastructure investment may extend to reducing conflict, because climate-related shocks are more likely to tip fragile economies into conflict (Burke et al 2024). Employment programs targeting ex-combatants may attenuate the risks of resurgent conflict by lessening economic incentives to take up arms (Blattman and Annan 2015). And, in commodity-dependent environments, economic diversification and improved governance over resource extraction may lessen likelihood of fighting for control of resource-rich areas (Berman et al 2017). In addition, social structures characterized by majority-minority ethnic or religious groupings may exacerbate civil conflict risks by entrenching the political dominance of the majority and generating socio-economic exclusion (Collier and Hoeffler 2004; Denny and Walter 2014). Credibly committing to the political representation of minority groups and to safeguards preventing the excessive concentration of political power—for example through constitutional provisions—may diminish such risks.

Resolving long-running conflicts is a daunting challenge for many LICs. All successful efforts at conflict resolution are specific to the situation, but reaching peace has commonly required extensive negotiations, the credibility of which can potentially be bolstered by engagement with neutral facilitators such as international bodies, foreign governments, or non-government organizations. Peace settlements are more likely to endure when they are inclusive, for example by ensuring political representation and the reintegration into society of hostile factions (Call 2012). Case studies of two LTMs that exited civil conflicts without relapsing—Nepal and Papua New Guinea—serve to illustrate these factors:

- *Nepal:* Nepal’s civil war ran from 1996-2006, ending with the Comprehensive Peace Accord of November 2006. The agreement established an interim consensus-based govern-

ment that included former Maoist rebels and other political parties. The interim government gave way to a coalition government following elections 18 months later. The Nepal army, having fought the war, deferred to the political process (Falch and Miklian 2008). Provisions in the accord specified joint responsibility for maintaining peace and prioritized the disarming and rehabilitation of insurgents. International actors such as the United Nations supported the process. Implementation of the accord has not been without challenges, but Nepal has remained at peace, with regular elections. Nepal's per capita growth rate picked up substantially after 2006, and the country attained middle-income status in 2019 (figure 4.13B).

- *Papua New Guinea*: The Bougainville Civil War—a secessionist conflict between the government of Papua New Guinea and the Bougainville Revolutionary Army—lasted from 1988 to the late 1990s. The initial cessation of fighting followed peace talks in 1997 that reached a consensus on disarming local forces, withdrawing government forces from the island of Bougainville, and establishing an unarmed monitoring group of neutral observers. The subsequent Bougainville Peace Agreement, signed in 2001, codified regional autonomy and a weapons disposal plan, and laid down parameters for a non-binding independence referendum. With GDP per capita collapsing after 1994, Papua New Guinea became a LIC in 2001. Although the country still faces formidable governance challenges, the end of the conflict proved durable, and growth picked up thereafter. Papua New Guinea regained middle-income status in 2008.

**Creating fiscal space.** For the roughly half of LICs in or close to, debt distress creating fiscal space is critical to enabling other reforms and crucial for lessening macroeconomic risks. Otherwise, budget constraints and high sovereign risk premia mean such countries are unlikely to meaningfully raise investment. Similarly, large interest payments and debt redemptions will squeeze out spending on education and healthcare. Moreover, negative shocks could quickly morph

into debt crises (Kose et al. 2021; World Bank 2024i). Such circumstances necessitate a multi-pronged approach to generating fiscal space that involves changes in spending and revenue generation. For example, on the spending side, regressive subsidies, including for those for fossil fuels, can be phased out in favor of pro-poor spending. A tight focus on the efficiency of government spending, including bearing down on corruption and curbing sometimes excessive public sector wage bills, can generate stronger economic returns (Mawejje 2024a). On the revenue side, base broadening measures and strategies to promote formalization—such as streamlining cumbersome regulatory hurdles to business expansion—are likely more promising than further taxing small bases of activity. At the same time, investing in improved tax administration can yield large returns (Dom et al. 2022).

**Improving natural resources governance.** For commodity-exporting LICs, strengthening institutions for natural resource governance is especially important. Resource dependent LICs, and particularly energy exporters, have had disappointing growth outcomes over the past decade. These countries are vulnerable to recurring terms-of-trade shocks, which, because of pre-existing structural vulnerabilities, including weak institutions of governance, poor business environments, and limited human capital, result in persistently low growth outcomes (IMF 2024c).

The prudent management of resource revenues can be enhanced by anchoring fiscal and monetary discipline. Credible and well-designed policy frameworks—including utilization of mechanisms such as fiscal rules, medium-term expenditure frameworks, and stabilization funds—can reduce the procyclicality of fiscal policy, build fiscal space, and strengthen policy outcomes (Arroyo Marioli, Fatas, and Vasishtha 2023; World Bank 2024e). These can also help LICs improve budget management, including management of revenue windfalls. While prudent use of natural resources can drive diversification and transformation in current LICs, the window to take advantage of fossil fuels faces strong headwinds from the climate transition and rapid development of green technologies. Reserves of fossil fuels will soon become stranded assets (Addison and Roe 2018). For countries with

rich reserves of green minerals—such as cobalt, lithium and copper—improving current approaches to their extraction and revenue management, including transparency in the allocation of mining rights and enforcement of labor standards, can help drive greater and more inclusive economic benefits.

It is also important that natural resource dependent economies develop robust monetary frameworks able to withstand terms-of-trade volatility. In fixed exchange rate regimes, this necessitates holding substantial foreign exchange reserves to bolster confidence in the system’s nominal anchor—which, in turn, requires the institutional capacity to ensure the prudent management of such reserves. Alternatively, where financial markets are sufficiently developed, increased exchange rate flexibility can help buffer economic volatility generated by sudden commodity price movements.

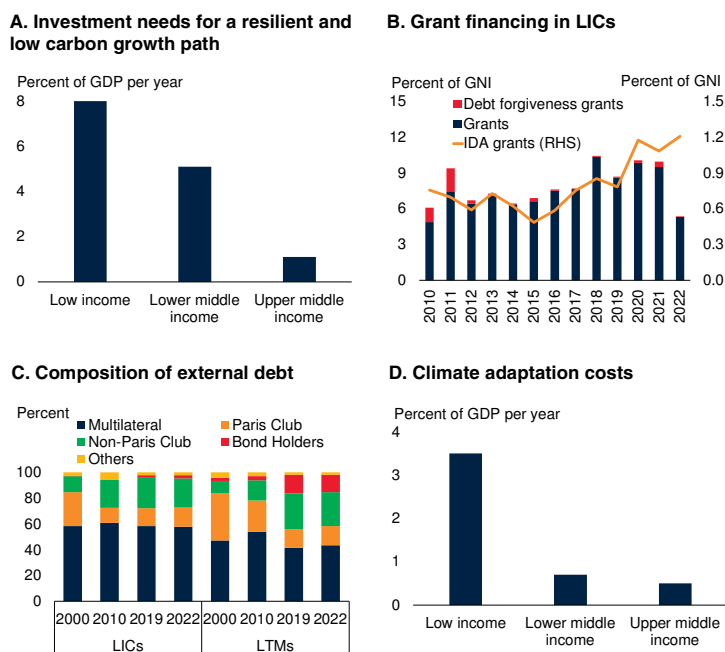
### Global Policies

The international community can play a proactive role in helping LICs accelerate growth and development. The scale of investment and capacity-building required to meet urgent development challenges is simply too great without increased international support that is well-coordinated and provides tailored financial and technical assistance. Through international efforts, LICs can be supported to take advantage of structural growth opportunities, while increasing resilience to a wide range of shocks.

**Increasing concessional financing.** By some estimates, LICs will require annual investment of 8 percent of GDP through 2030 to meet development objectives, including climate goals (figure 4.14A). Investment needs are estimated to be particularly high in Sub-Saharan Africa, and those needs likely have grown due to pandemic-related scarring (Rozenberg and Fay 2019; Benedek et al. 2021). Without greater concessional financing, LICs will lack the resources required to finance such investments at the necessary pace and scale. Some LICs already face liquidity challenges, with interest payments taking a growing share of domestic revenues. More generally, to put in place the scale of programs required to address chronic

**FIGURE 4.14 Global policy priorities**

LICs have large investment needs for resilient and green growth paths and to meet the annual costs of adaptation to climate change. Grants have recently been declining in LICs, with declines faster since 2020, even as IDA financing has increased. Because they lack alternative financing means, LICs have taken on much more non-concessional external debt as a share of total external debt since 2000.



Sources: International Debt Statistics (database); Rozenberg and Fay (2019); UNEP (2023); WDI (database); World Bank.  
 Note: GNI = gross national income; LICs = low-income countries; LTM = LICs turned into middle-income countries. IDA = International Development Association.  
 A. Estimates of the annual investment needs to build resilience to climate change and put countries on track to reduce emissions by 70 percent by 2050. Depending on data availability, estimates include investment needs on transport, energy, water, urban adaptations, industry, and landscape.  
 B. Grants are defined as legally binding commitments allocating funds for disbursement without any requirement for repayment. Data are on a disbursement basis and cover flows from all bilateral and multilateral donors. IDA grants are net disbursements of grants from IDA.  
 C. GDP-weighted average of public and publicly guaranteed external debt. “Others” includes multiple lenders. Based on 24 LICs and 41 LTM.  
 D. Total undiscounted annual costs of climate change adaptation for the period up to 2030.

shortfalls in meeting the sustainable development goals, LICs have a pressing need for steady, predictable, and low-cost financial flows.

The financing challenges in LICs are compounded by declining aid disbursements from the international community. Net official development assistance (ODA), which includes disbursements of loans made on concessional terms, has declined since 2020 by 5 percentage points to 7 percent of GDP in 2022—its lowest level in two decades. Grants from the International Development Association (IDA) have grown significantly over the past decade and have more than doubled since

2015 to 1.2 percent of GDP in 2022 (figure 4.14B). However, given the large and growing needs, IDA grants will be insufficient even with recent enhancements. Greater global cooperation is essential to help the world's poorest countries restore sustainable fiscal positions that can support their long-term development aspirations. The international community and multilateral development banks should also continue to seek to catalyze financing for LICs, working with the private sector to mobilize additional resources (IEG 2023; Chrimes et al. 2024). This could include mobilizing higher inflows from private creditors, including by providing incentives through credit enhancements, and liability management operations, such as debt-for-development swaps.

**Providing debt relief.** LIC fiscal positions have weakened significantly over the past decade and many LICs are already in or at high risk of debt distress. A rise in exposure to non-concessional external debt has increased fiscal risks (figure 4.14C). The increased exposure of LICs to non-Paris Club official creditors and commercial creditors also poses coordination challenges for debt resolutions. For debt that is owed to foreigners, denominated in foreign currency, and adjudicated by foreign courts, default and debt restructuring can become a country's only option—one that usually imposes high long-term costs (Kose et al. 2022). Without quick action, LICs could end up with a situation similar to the 1980s and 1990s when it took decades to solve their debt crisis (Kose et al. 2021). Where past debt relief initiatives have been successful, they have sometimes been associated with subsequent investment and growth accelerations in LICs (box 4.1; World Bank 2024e).

For LICs in, or at high risk of, debt distress, providing debt relief should be a high priority. There have been several initiatives to do this. In November 2020, following their Debt Service Suspension Initiative (DSSI), the G-20 countries announced the Common Framework to provide

debt treatment for DSSI-eligible countries with unsustainable debts (IMF 2021).<sup>14</sup> While the Common Framework initially struggled with creditor coordination and implementation delays, recent developments suggest it is becoming more effective, helped in part by the creation of the Global Sovereign Debt Roundtable (World Bank 2024i).<sup>15</sup> Within the Common Framework, Chad was the first country to conclude an agreement with its official creditors in 2022. In 2023, Zambia became the second country to conclude a debt restructuring agreement, reaching a milestone agreement with bilateral creditors, including China, with a subsequent formal agreement with its sovereign bondholders in March 2024. Ethiopia and Ghana also achieved progress under the Common Framework (World Bank 2024j).

Processes outside the Common Framework are also making progress, as evidenced by agreements on Sri Lanka's debt. Still, timelines remain beyond the typical time frame observed in the past, which hurts both the debtor and its creditors. Where applicable, in particular for Common Framework cases, the timeline to form an official creditor committee could be shortened, to take the best advantage of a format that ensures efficient sharing of information with all participants. This would also help expedite communication and coordination with private creditors and accelerate their own restructuring processes.

**Accelerating climate adaptation.** LICs are unusually vulnerable to climate change because of their geographic locations, dependence on agriculture, capacity constraints, and limited macro-financial buffers (IMF 2024a). Without adequate mitigation measures, climate change could precipitate GDP losses of 7 to 12 percentage points by 2050 in some African LICs—higher than other EMDEs (World Bank 2022c). Well-coordinated global efforts are needed to finance the investment required to increase resilience and adaptation

<sup>14</sup>The Debt Service Suspension Initiative (DSSI) offered the suspension of debt payment obligations on official sector debts for the poorest countries to allow them to create fiscal space to respond to the COVID-19 pandemic.

<sup>15</sup>Co-chaired by the Group of Twenty (G-20), the IMF, and the World Bank, this group includes official creditors, large private creditors, and debtors. It aims to build consensus on debt issues, focusing on such technical matters as restructuring timelines, information sharing, domestic debt treatment (including holdings by nonresidents), assessing comparability of treatment, engaging with credit rating agencies, and suspending debt service (World Bank 2024i; 2024j).

capacity. Annual adaptation costs in LICs have been estimated at 3.5 percent of GDP, on average, compared to 0.7 percent in lower middle-income countries (figure 4.14D; UNEP 2023). Such needs amount to many times the United Nations' estimates of current flows of international adaptation finance.

Given the scale of investment required to mitigate climate impacts, LICs will need to mobilize resources at unprecedented scale. However, domestic resources will not be enough and many LICs have weak fiscal positions. It is therefore important that additional climate finance flows take account of any associated fiscal risks. The international community, including multilateral development banks, can work with the private sector to mobilize additional resources at viable costs. Access to a larger pool of concessional financing and grants, including through the IDA, will be vital to support climate action in low-income climate vulnerable countries (Bhattacharya et al. 2024).

LICs can also play a crucial role in the global community efforts to achieve broader climate goals by providing metals and minerals critical for the green transition. LICs account for less than 1 percent of global carbon dioxide emissions, but they have significant endowments of such green metals and minerals as lithium and cobalt. Leveraging these resources will require the support of the international community, both to mobilize investment and to develop the institutional architecture that is supportive of long-term growth and helps avoid the so-called resource curse.<sup>16</sup> Ample potential for solar could enable some LICs to model comparatively low-emissions and equitable development pathways without implying any trade-off for the pace of improvements in living standards.

**Improving global trade and investment climate.** Recent widespread emphasis on industrial policies in advanced economies, a global increase in

protectionist measures, and sluggish global trade growth do not portend well for trade-led development (World Bank 2024c). Geopolitical risks have also intensified and threaten more regular disruptions to trade networks and supply chains (World Bank 2024e). To reinvigorate trade growth and guard against trade fragmentation, the international community should place greater emphasis on a consistent rules-based multilateral trade system to reduce trade policy uncertainty. At the multilateral level, measures are needed to reinstate and reform the dispute settlement system, and enhance transparency, especially regarding distortions from industrial policies (IMF et al. 2022). Countries could also resume efforts to expand and deepen formal trade agreements.

Landlocked LICs can take advantage of opportunities to deepen regional trade by facilitating regional integration and eliminating trade barriers—as the African Continental Free Trade Area aspires to do (World Bank 2020b). Deepening trade can have additional benefits that include reducing food insecurity, spurring investment, raising productivity, reducing uncertainty, and helping to counteract conflict and violence (IMF 2023a; Martin, Mayer, and Thoenig 2008). The potential benefits from trade in LICs would be enhanced by infrastructure integration and improved business environments, including streamlined customs procedures (Fontagné et al. 2023; Okumu et al. forthcoming). International support in these areas can be enhanced.

**Providing technical assistance.** How well policy reforms achieve their objectives depends on consistent implementation over years. While some LICs have made progress in many reform areas, including the use of technology in government processes, gains have been uneven. In many cases, implementing the kinds of reforms necessary to improve the policy environment requires substantially increased state capacity. Otherwise, shortcomings in technical and administrative processes may hinder otherwise promising reform agendas. The international community has a critical role to play in supporting LICs through tailored technical assistance and capacity-building interventions. Technical assistance can also support LICs to effectively absorb and utilize additional resources.

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<sup>16</sup>Resource curse refers to the phenomenon of countries with an abundance of natural resources having inferior economic outcomes than resource poor countries (see for example: Sachs and Warner 2001; van der Ploeg 2011).

Finally, it is important to recognize that today's LICs are data-poor environments in the grip of extremely complex challenges. In that context, judgments over how to best address development gaps—for example, extreme poverty, agricultural productivity, and the scant reach of public services—must be flexible and informed by rigorous on-the-ground empirical assessments. Resourcing such work in today's LICs and similar settings is essential to building a knowledge base that enables the most effective utilization of scarce resources (Banerjee and Duflo 2011; Duflo 2020).

## Conclusion

Reducing extreme poverty depends on progress among LICs. Since 2000, substantial strides have been made in raising living standards in EMDEs that are not low-income, including 42 LTMs. Even though growth momentum among middle-income countries has ebbed since the 2010s, most EMDEs are making steady, if unspectacular, gains in per-capita income. In contrast, LICs as a whole have seen feeble growth for 15 years, with structural transformation stalling and institutional quality in decline.

Diagnosing the difficulties facing LICs requires recognizing fundamental differences relative to past cohorts of low-income countries that have graduated to middle-income status. Today's LICs have long been poorer than LTMs. They have less physical and human capital, larger agricultural sectors, and higher poverty levels than LTMs did when they were low-income in 2000. On top of that, they receive less development assistance per person than their LTM peers.

For most LICs, recent trends will not deliver the income gains needed to break out of low-income status any time soon. Less than a quarter of LICs appear on course to graduate by 2050. Improving this outlook will require sustained investment and productivity increases of the type that have only previously occurred in LICs during distinct growth accelerations. Among countries at the lowest income levels, such accelerations occurred following reforms that increased market orientation and channeled resources into capital

accumulation, backed by comparatively capable governance.

LICs will need to overcome daunting obstacles, some of which are particular to their generation. Perhaps most important, many LICs need to end recurrent conflicts—a tall order. After the COVID-19 pandemic and subsequent global shocks, LICs' fiscal positions are also precarious. As climate change escalates, LICs face outsized impacts. And, clustered together, they lack the geographical good fortune of wealthy neighbors at a time when global potential growth is declining, and trade fragmentation and geopolitical tensions are escalating.

While the challenges are severe, if they are girded by greater domestic peace and stability, LICs possess endowments that could catalyze growth. Resource rents, properly managed, could be invested in infrastructure, education, and diversification. Ample solar energy could improve competitiveness. Against a backdrop of stronger security, tourism could take off, while low levels of trade openness imply potentially greater gains from trade integration. Such beneficial shifts could be underpinned by a sizeable demographic dividend if education and skills training are improved for swelling LIC labor forces.

If more LICs are to graduate in the coming years, it will principally be because of actions taken in LICs themselves. More LICs will have attained sustained peace. Domestic policymakers will have succeeded in driving up investment growth and delivering institutional reforms, while avoiding economic and governance missteps. However, to help LICs move the needle in several key areas, the international community has a critical role to play. LICs will need the breathing space afforded by increased concessional financing, augmented by technical assistance and, where appropriate, debt relief. In particular, the global community could shoulder more of the burden to prevent climate change from derailing LICs' development. Finally, the global community can reembrace a fit-for-purpose, rules-based trading system, and not subject LICs to disorderly global fragmentation.

### BOX 4.1 Low-income growth accelerations: Lessons from country case studies

*Growth accelerations that started in countries at income levels similar to those prevailing in today's LICs were often preceded by a mix of country-specific growth-friendly reforms. These reforms usually focused on some combinations of increasing the economy's degree of market orientation; restoring or enhancing macroeconomic stability; channeling greater resources into investment; and upgrading human capital.*

The empirical analysis in this chapter documents the features of growth accelerations in low-income countries—spells in which per capita output growth increases at a rapid rate, relative to country-specific growth averages and volatility (see Annex 4.1 for details). However, only a small number of these accelerations occurred in countries that at the time were so poor as to be directly comparable to today's LICs. This box examines several of these spells in detail. It focuses on five growth accelerations in three LTMs: Nepal (2008-2019), Viet Nam (1991-2019), and Kenya (2010-2019); and two current LICs: Ethiopia (2004-2019), and Rwanda (2001-2012). It aims to answer the following questions:

- What types of policy changes helped trigger low-income growth accelerations?
- How did economies structurally evolve during these episodes?

#### Growth accelerations in LTMs

##### *Nepal (2008-19)*

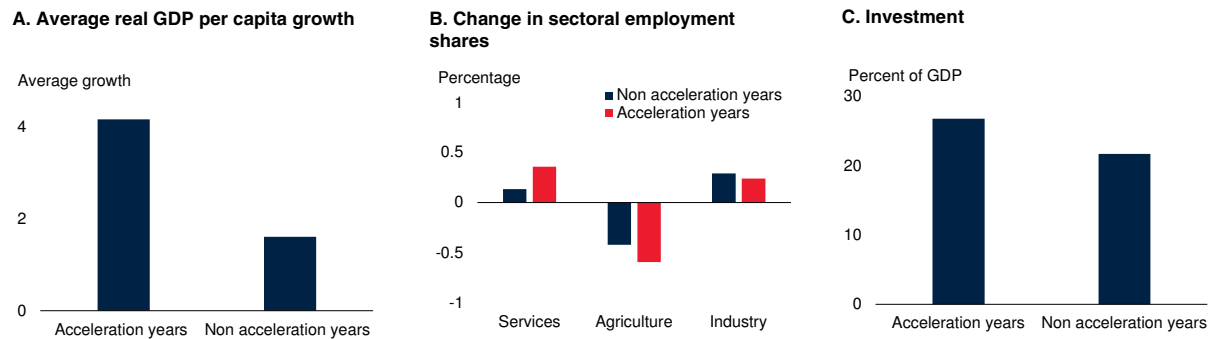
**Economic Performance.** Nepal entered a growth acceleration in 2008, which sustained for 12 years until the COVID-19 pandemic. Relative to many other growth accelerations, the rate of per capita growth during Nepal's acceleration was lower—in part reflecting deep-seated structural challenges such as the country's topography and susceptibility to natural disasters (Covic, Dahal, and Kitzmuller 2017). However, advancing at more than 4 percent annually—versus 1.6 percent in other years since 1990—real per capita GDP nonetheless increased by about two thirds between 2007 and 2019. This saw Nepal graduate in 2019, despite starting the century around the middle of the income distribution of today's LICs. Nepal's recovery from the pandemic has since been weak, however, with real per capita GDP only slightly above its 2019 level in 2023 following commodity import shocks and monetary tightening, and amid a still incomplete recovery in the tourism sector.

Nepal's growth acceleration coincided with strong progress on poverty reduction. Already, by 2010, less

than 10 percent of the population lived in extreme poverty (on less than \$2.15 per day), but by 2022, three years after the acceleration ended, the proportion had declined to less than 1 percent. Further, the proportion living on less than \$3.65 per day was whittled down by more than 30 percentage points between 2010, a couple of years after the acceleration started, and 2022. Income inequality remained on a downward trajectory during the growth acceleration, having decline significantly over the 2000s. The income share of the bottom fifth of the population increased by one third between 2003 and 2022, reaching 8.7 percent, while the Gini coefficient fell substantially between 2003 and 2010 and continued to more gradually wane thereafter. Wider social indicators also saw a significant improvement during the growth acceleration, as life expectancy increased by more than three years, while infant mortality fell by nearly 40 percent.

While dividends from faster growth contributed to favorable poverty trends, surging remittances also played a key role (Salike, Wang, and Regus 2022). From a structural perspective, the agricultural employment share declined materially, by around 7 percentage points over the acceleration, with about two-thirds of freed up labor absorbed by services and a third by industry. Productivity advanced steadily in all sectors, but traditional industrialization was limited, with upward pressure on the real exchange rate from elevated remittances encumbering export performance. Instead, driven by tourism, transportation, and real estate, the services share of output gradually increased, surpassing 50 percent in the mid-2010s. Key features of Nepal's growth acceleration are illustrated in figure B4.1.

**Policy Drivers.** A substantial degree of growth-enabling reform took place in the late 1980s and early 1990s. Over that period trade and financial sector liberalization started alongside reforms to deregulate access to agricultural inputs (World Bank 2005). Subsequently, in 2004, Nepal joined the WTO as a full member. However, the period between 1996 and 2006 was marred by a protracted civil war and extreme political uncertainty, undercutting prospects for significant

**BOX 4.1 Low-income growth accelerations: Lessons from country case studies (continued)**
**FIGURE B4.1.1 Nepal's growth acceleration**


Source: WDI (database); World Bank.

Note: The sample period is 1990-2023. Acceleration years cover 2008 – 2019.

A.C. Bars are simple averages of annual real GDP growth rates, annual change in sectoral shares of employment, and the share of gross fixed capital formation in GDP during and outside of growth accelerations.

growth dividends from prior structural reforms. In 2006, a negotiated political settlement gave rise to durable peace. Thereafter, a steady pick-up in growth materialized, accompanied by a sizeable increase in the investment to GDP ratio—from around 20 percent to over 30 percent in the late 2010s—concentrated in infrastructure, and particularly in energy, transport, and telecoms (IMF 2020b). Policies supporting trade openness also allowed Nepal to benefit from the economic growth of its neighbors and trading partners. Nepal's economy is deeply intertwined with India's—the countries share a 1750-kilometer border. India accounts for most of Nepal's trade, with the Nepalese rupee pegged to the Indian rupee, and India was also in a growth acceleration for the entirety of Nepal's (Ding and Masaha 2012). Trade between India and Nepal is aided by membership of the South Asian Free Trade Area agreement, signed in 2004, but ratified in India in 2009.

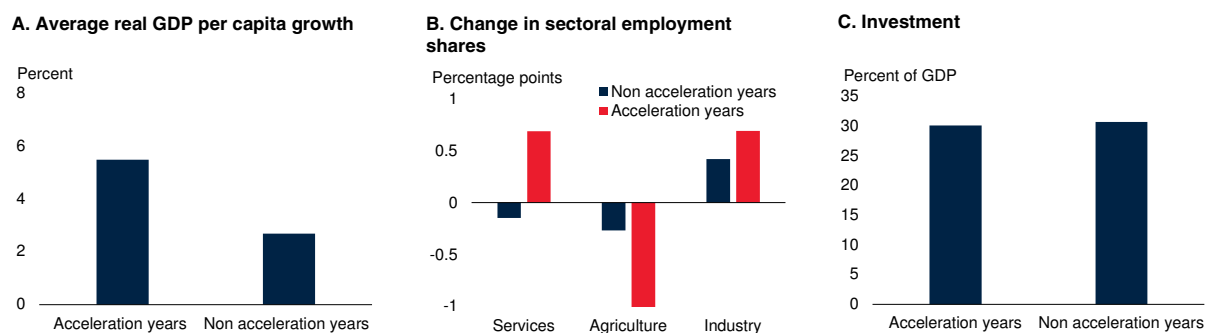
### *Viet Nam (1991-2019)*

**Economic performance.** Viet Nam started the 21st century as one of world's poorest countries, with a per capita GDP in U.S. dollar slightly below the 2000 LIC median. Since then, Viet Nam has achieved rapid economic progress, graduating to lower middle-income status in 2009, as its real GDP per capita nearly doubled. Viet Nam's growth acceleration, one of the longest on record, started in 1991 and was upended

only by the COVID-19 recession of 2020. Between 1991 and 2019, Viet Nam's real annual GDP growth per capita averaged 5.6 percent, almost twice the rate in non-acceleration years. This sustained period of growth was accompanied by a substantial decline in inflation, low unemployment rates, modest fiscal and current account deficits, and relatively low debt levels. Even during the global recession of 2009, the country maintained positive growth, reflecting the strength of its domestic market and the effectiveness of government policies. Limited exposure to risky financial instruments and Viet Nam's position as a manufacturing hub further insulated the economy, ensuring steady growth acceleration despite global challenges (IMF 2009). During the growth acceleration, the proportion of the population in extreme poverty (\$2.15 2017 PPP) fell from 48 percent in 1992 to less than 1 percent in 2020 (World Bank 2022d). Viet Nam's growth spell was both transformative and inclusive. The country ranks in the top quarter of emerging market and developing economies with respect to reaching the Sustainable Development Goals (Baum 2020; World Bank 2024k). Key features of Viet Nam's growth acceleration are illustrated in figure B4.2.

**Policy drivers.** The 1991 growth spell in Viet Nam was sparked by reforms known as *Doi Moi* or "renovation" that started in 1986. These reforms focused on addressing four major economic distortions. First, the reforms sought to facilitate a transition to a market



**BOX 4.1 Low-income growth accelerations: Lessons from country case studies (continued)****FIGURE B4.1.2 Viet Nam's growth acceleration**

Source: WDI (database); World Bank.

Note: The sample period is 1990-2023. Acceleration years cover 1991 – 2019.

A.C. Bars are simple averages of annual real GDP growth rates, annual change in sectoral shares of employment, and the share of gross fixed capital formation in GDP during and outside of growth accelerations.

C. Due to the extended coverage of acceleration years, non-acceleration years coverage is limited. However, when further historical data is considered beyond 1990, the gross fixed capital formation during acceleration years becomes significantly higher than non-acceleration years.

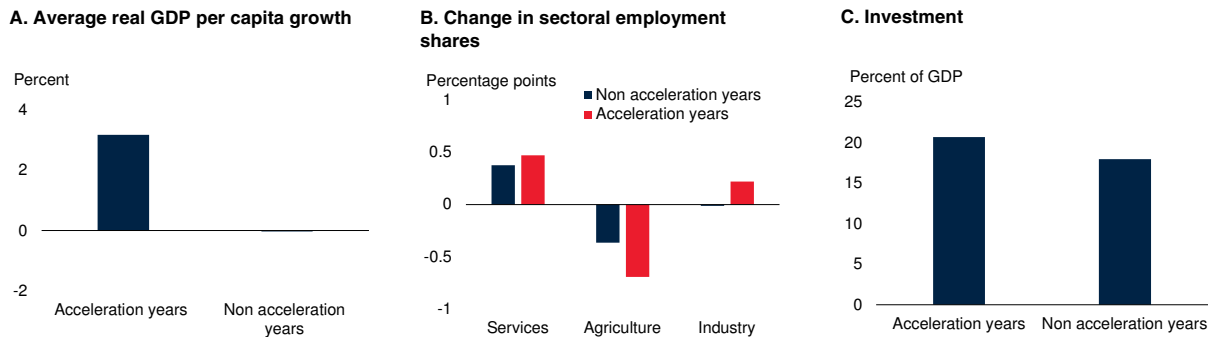
economy, with a focus on trade liberalization and improvements in the business environment (IMF 2019; Schaumburg-Müller, 2005). Central to this effort were trade reforms that enabled the country's integration into the global economy, with Viet Nam's accession to the WTO in 2007 solidifying its position in global trade (World Bank 2024k). Second, macroeconomic reforms—including the relaxation of price controls, stricter fiscal discipline, and restrictive monetary policy—aimed at achieving price stability, positive real interest rates, and a competitive exchange rate (Bhattacharya 2013; Camen 2006; Irvin 1995). Third, policies were introduced to address key deficits in human capital and public infrastructure, with a focus on the expansion of access to education, health, and electricity (Baum 2020). Fourth, public enterprise reforms, especially the restructuring, liquidation, divestment and equitization of key government-owned enterprises, sought to reduce the role of the government and to encourage private enterprise (Dang et al. 2021; World Bank 2016a). Other reforms were aimed at diversifying the economy to attract foreign direct investment in key sectors, including light manufacturing, energy and extractives, and tourism (Jenkins 2006; World Bank and IFC 2021). Reforms in the agriculture sector sought to increase investment and productivity by removing price controls and strengthening property rights, while facilitating the adoption of modern

technology and access to capital inputs and fertilizer (McCaig and Pavcnik 2013).

**Kenya (2010-19)**

**Economic performance.** In 2000, Kenya's GDP per capita in U.S. dollars was close to the median of the LIC income distribution. Kenya's growth acceleration started in 2010 and was ended by the recession caused by the COVID-19 pandemic. Kenya graduated to middle-income status in 2016, halfway into its growth acceleration.<sup>a</sup> During the acceleration, real per capita GDP growth averaged 2.6 percent, compared with 0.3 percent during non-acceleration years. Kenya's real per capita GDP increased by about a third during the acceleration. During this period, Kenya achieved notable macroeconomic stability, with moderate exchange rate volatility and inflation largely within the central bank's target (Alper et al. 2017). Nevertheless, exchange rate appreciation between 2010 and 2019 made exports less competitive and weighed on industrial growth (Owino, Barasa, and Doyle 2024). The services sector was the main driver of growth during the acceleration. The agricultural share of employment declined by 7 percentage points to about 34 percent in

a. Kenya's lower-middle income status was confirmed after rebasing the country's GDP, which revealed that the size of the economy was 25 percent larger than previously estimated.

**BOX 4.1 Low-income growth accelerations: Lessons from country case studies (continued)**
**FIGURE B4.1.3 Kenya's growth acceleration**


Source: WDI (database); World Bank.

Note: The sample period is 1990-2023. Acceleration years cover 2010 – 2019.

A.C. Bars are simple averages of annual real GDP growth rates, annual change in sectoral shares of employment, and the share of gross fixed capital formation in GDP during and outside of growth acceleration.

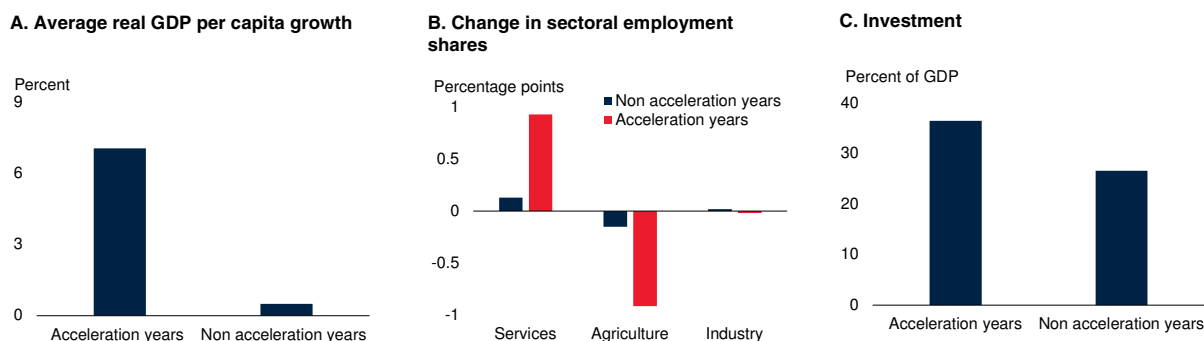
2019; the employment share in industry increased by 2 percentage points to 15 percent and services grew by 5 percentage points to 51 percent.

Living standards improved somewhat during Kenya's growth acceleration. The share of people living in extreme poverty is estimated to have declined by 2 percentage points to 32 percent in 2019, with marginal reductions in inequality (World Bank 2019; 2023b). Nevertheless, progress on the broader Sustainable Development Goals agenda has stagnated or regressed for 12 of the 17 goals (Sachs, Lafortune, and Fuller 2024). Recent developments—including stalled progress on the broader measures of welfare and sustainable development, as well as high levels of actual and perceived inequality and exclusion—highlight the limitations of public expenditure oversight and the need to improve the quality of growth (IMF 2024c). Key features of Kenya's growth acceleration are illustrated in figure B4.3.

**Policy drivers.** Kenya's growth acceleration was sparked by a set of policy initiatives, including the implementation of market-oriented reforms, restoration of macroeconomic stability, strengthening of governance institutions, expansion of physical infrastructure, and fostering of financial sector innovations (World Bank 2020c). First, the Economic Recovery Strategy (ERS) of 2003 sought, among other things, to address key macroeconomic vulnerabilities, structural weaknesses, and governance gaps (Sasaoka

2005). The major challenges facing government at the time were how to restore economic growth, reduce poverty, and create jobs. Second, through the 2003-2007 Investment Program for Economic Recovery Strategy for Wealth and Employment Creation, Kenya sought to accelerate economic growth and poverty reduction by encouraging private enterprise, improving economic governance, and building human capital by investing in education and health (IMF 2005a).

Kenya made several growth-friendly reforms that encouraged private investment. Price controls were eliminated, interest rates were liberalized, and a competitive exchange rate policy was introduced (Ndung'u and Ngugi 1999). The reform of state-owned enterprises reduced the number of parastatals. Further reforms sought to ease the complexity of tax regulations and excessive tax burdens (Karingi and Wanjala 2005). Peace and stability have been key to Kenya's economic performance as the country took advantage of its geographic location to position itself as a regional financial and trade hub (Kimenyi, Mwega, and Ndung'u 2016). Greater structural reform momentum—which was lacking in the 1980s and 1990s—lent impetus to growth in the 2000s. On the supply side, the gains from these reforms were evident in the high growth of the services sector. On the demand side, government expenditure—and particularly greater infrastructure spending—has been a key driver of domestic demand (World Bank 2020c).

**BOX 4.1 Low-income growth accelerations: Lessons from country case studies (continued)****FIGURE B4.1.4 Ethiopia's growth acceleration**

Source: WDI (database); World Bank

Note: The sample period is 1990-2023. Acceleration years cover 2004 – 2019.

A.C. Bars are simple averages of annual real GDP growth rates, annual change in sectoral shares of employment, and the share of gross fixed capital formation in GDP during and outside of growth accelerations.

In the 2010s, Kenya's government adopted expansionary fiscal policies to stimulate economic growth and achieve the goals set out in Vision 2030 (IMF 2015).<sup>b</sup> The government prioritized spending on both economic and social infrastructure, aiming to enhance productivity and to reduce poverty (World Bank 2020c). Additionally, investments in education and health have improved labor productivity (World Bank 2014; World Bank 2023d). Kenya's financial sector innovations and the supportive regulatory environment have also significantly advanced financial inclusion, enabled by the rapid expansion of mobile financial services (Gutierrez and Singh 2013; IMF 2018; Jack and Suri 2014). These reforms were supported by a constitutional change in 2010 that decentralized political power and sought to improve governance.

### Growth accelerations in LICs

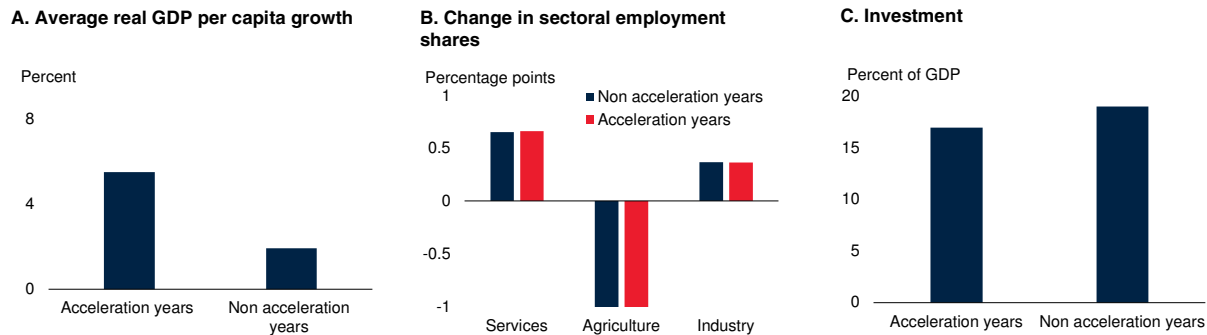
#### *Ethiopia (2004-19)*

**Economic performance.** Ethiopia had a growth acceleration from 2004 to 2019 during which real per capita growth averaged about 7 percent compared to less than 0.5 percent in other years since 1990. Ethiopia started the century as the poorest LIC, but during its

acceleration per capita GDP trebled bringing the country to the brink of middle-income status. During this period, extreme poverty also fell notably; about a quarter of the population is estimated to have lived on less than \$2.15 a day in 2015, down from more than one third in 2004. Alongside, life expectancy rose by a decade and infant mortality halved (IMF 2024d). The acceleration was ended by the COVID-19 pandemic although growth had already cooled amid political instability and rising macroeconomic imbalances. Since 2020, Ethiopia's recovery has been severely hampered by civil conflict and unsustainable debt.

The agriculture sector was a key driver of growth during the initial acceleration phase, followed by an increasing contribution from the service sector (Hausmann et al. 2022). In subsequent years, a construction boom, coupled with moderate success in developing textiles and footwear subsectors, saw the industrial share of GDP double. Employment shifted rapidly from agriculture to services during the acceleration. The agricultural share of employment declined by nearly 1 percentage point annually, offset entirely by expanding services employment. This shift was enabled by a doubling of agricultural productivity—facilitated by a combination of improved fertilizer access, extension programs, and an expanding the road network—but services productivity also grew at nearly 4 percent annually (World Bank 2016b). Key features of Ethiopia's growth acceleration are illustrated in figure B4.4.

b. While this fiscal expansion contributed to significant improvements in infrastructure and spurred economic growth, it also led to rising public debt levels and concerns about fiscal sustainability (Ryan and Maana 2014).

**BOX 4.1 Low-income growth accelerations: Lessons from country case studies (continued)****FIGURE B4.1.5 Rwanda's growth acceleration**

Source: WDI (database); World Bank.

Note: The sample period is 1990-2023. Acceleration years cover 2001 – 2012.

A.C. Bars are simple averages of annual real GDP growth rates, annual change in sectoral shares of employment, and the share of gross fixed capital formation in GDP during and outside of growth accelerations.

**Policy drivers.** The groundwork for Ethiopia's acceleration was partly laid by reforms in the 1990s that lessened state control of the economy. This included privatizations and a large reduction in average tariff rates (Mengistu 2021). Alongside, the Agriculture Development Led Industrialization strategy of the late 1990s and early 2000s fostered agricultural productivity by improving the availability of agricultural inputs, encouraging crop diversification and investing in supporting infrastructure such as rural transportation and water supply (World Bank 2008b). Ethiopia's land certification program, which aimed to strengthen land tenure security for farming households, also helped to improve investment and productivity in agriculture (Holden, Deininger, and Ghebru 2009). In parallel, an increasing focus on expanding educational access and providing technical and vocational training laid the foundations for a more skilled workforce (Seid, Taffesse, and Ali 2016).

A further critical driver of Ethiopia's acceleration was a sustained public investment drive, encompassing a series of public investment-intensive strategies including the 2005 Plan for Accelerated and Sustained Development to End Poverty, and the first (2010-15) and second (2015-2020) Growth and Transformation Plans. The ratio of general government investment to GDP doubled from about 5 percent prior to the acceleration to around 10 percent in the mid-2010s. Moreover, this figure understates total public investment given the

prominent role of state-owned enterprises in flagship government strategies.

Extensive investments in communications, energy and transportation infrastructure, as well as education and healthcare, were enabled in part by constrained government consumption. In addition, however, resources were appropriated through a range of heterodox policies, including via financial repression and substantial seigniorage revenues generated by high inflation. As such, private investment was constrained by the implicit rationing of capital, and the real exchange rate appreciated. This reduced the cost of imported capital goods but posed headwinds to export competitiveness and the related accumulation of foreign exchange.

Fiscal space for the public sector-led growth strategy was partly generated by reduced defense spending following the cessation of hostilities with Eritrea in 2000, and by debt relief in the mid-2000s under the Heavily Indebted Poor Countries Initiative (HIPC) and the Multilateral Debt Relief Initiative (MDRI; AfDB 2022; Hausmann et al. 2022). Yet external debt rose rapidly over the 2010s, financing a large current account deficit as the resources required for import- and investment-intensive growth outstripped domestic savings. Even so, from a starting point of extreme capital scarcity, infrastructure investment and associated positive externalities initially outweighed the growth

### BOX 4.1 Low-income growth accelerations: Lessons from country case studies (continued)

drag from allocative distortions (Moller and Wacker 2017).

That Ethiopia grew so rapidly despite its unusual policy mix exemplifies the large potential benefits of capital accumulation in LICs, especially backed by capable bureaucracy—based on the Worldwide Governance Indicators, since 2010 Ethiopia has consistently been in the top quartile of LICs for government effectiveness. However, the deceleration of growth in the 2020s and an external debt default in 2023 also highlight the limits and risks of a growth model heavily reliant on debt-financed public sector activity. Similarly, tepid export growth and weak private investment underscore the importance of maintaining reform momentum and competitiveness to catalyze new sources of growth, while continued political instability underscores the acute challenge of overcoming conflict.

#### *Rwanda (2001-12)*

**Economic performance.** Rwanda emerged from cycles of conflict and fragility to become one of the fastest growing low-income countries. In 2000, Rwanda's per capita GDP fell to the lowest quartile of LICs. Rwanda's growth spell started in 2001, eight years after the 1994 genocide, and lasted until 2012. Between 2001 and 2012, Rwanda's annual real GDP growth per capita averaged 5.7 percent, 1.5 percentage points higher than in non-acceleration years. Between 2000 and 2013, Rwanda's real GDP per capita doubled. By 2023, real GDP per capita had increased by more than another 50 percent, bringing the country to within 15 percent of the graduation threshold, on a par with Uganda, and behind only Ethiopia and Togo among LICs with the highest income per capita.

The growth acceleration was associated with broad improvements in living standards, especially in the earlier years. Between 2000 and 2013, the poverty rate in Rwanda (\$2.15 per day) declined by 21 percentage points to less than 55 percent. Accelerated growth also led to significant improvements in non-monetary well-being, particularly in maternal and child health. Since then, however, the relationship between growth and poverty reduction has weakened, resulting in poverty rates that are higher than other African countries with similar income levels. Moreover, inequality remains high, reflecting deeper structural challenges (World

Bank 2023e). While structural transformation remained the primary driver of poverty reduction in Rwanda, the labor released from agriculture was mostly absorbed in low-productivity services (World Bank 2020d). Nevertheless, Rwanda has been successful in developing some services-led export sectors, particularly tourism, ICT, and transport (Newfarmer, Page, and Tarp 2018). Key features of Rwanda's growth acceleration are illustrated in figure B1.5.

**Policy drivers.** Rwanda's growth acceleration was preceded by an ambitious reform effort that sought to stabilize the economy and incentivize private enterprise. Various macroeconomic and structural reforms were implemented to improve efficiency in the banking sector, liberalize the capital account, and reduce trade barriers (Malunda and Musana 2012). These reforms raised productivity by steering the economy from an administered one to a market-based one (Coulibaly, Ezemenari, and Duffy 2008). Second-generation reforms sought to improve the business environment and sought to eliminate excessive tax, legal, and regulatory burdens on firms. As such, the country emerged as one of the most competitive in the region, ranking above peers on various measures of doing business (Schwab 2019).

Broader institutional reforms strengthened the effectiveness of the public sector. This helped Rwanda develop a bureaucracy capable of maintaining order and efficiently delivering services, with notably little corruption (Chemouni 2017). Among the 50 economies assessed in the 2024 Business Ready report, Rwanda's scores placed the country among the top 10 in the public services and operational efficiency pillars (World Bank 2024l). In addition, the state has been instrumental in driving growth directly, with public investment accounting for approximately 40 percent of the country's GDP growth since 2000 (IMF 2023b).

Debt relief initiatives and development assistance championed by the international community also played a significant role in supporting Rwanda's growth acceleration (IMF 2005b). Rwanda's participation in these initiatives helped create fiscal space that allowed more resources to be channeled into long-term growth enhancing sectors, including education and healthcare.

## ANNEX 4.1 Identifying growth accelerations

Following Gootjes et al. (2024), growth accelerations are identified as periods in which growth of real GDP per capita in a country exceeds the following country-specific metric for at least eight years:

$$\varphi_i(\mu, \sigma) = \frac{1}{2}(\overline{\mu_{GDPPC_i}} + \overline{\sigma_{GDPPC_i}}) \quad (1)$$

where  $\overline{\mu_{GDPPC_i}}$  is the historical average real per capita growth rate for country  $i$ , and  $\overline{\sigma_{GDPPC_i}}$  is the standard deviation of per capita growth over the same period. As such, the metric accounts for long-term trends in growth in real GDP per capita and its volatility. Both the average and the mean exclude the maximum and minimum observations to limit the impact of outliers.<sup>17</sup>

The growth spell's eventual end is identified as the year in which per-capita GDP growth falls below the country-specific metric. However, to avoid a temporary growth dip being identified prematurely as an acceleration's end, a growth episode is considered as ongoing if average growth in the period around—and including—the dip remains above the metric. To prevent cyclical rebounds from being identified growth accelerations, episodes are excluded if the level of real GDP per capita in the final year of the acceleration is lower than in any year prior to the start of the growth spell.

## ANNEX 4.2 Resource discovery event studies

The event analyses in this chapter consider the evolution of two key macroeconomic variables: real GDP growth and primary government expenditure (percentage of GDP) around significant resource discoveries. The analysis builds on Kose et al. (2022) who studied the evolution of fiscal space around a set of defined

events. The following regression model is estimated:

$$v_{i,t} = \alpha_i + \sum_{j=-2}^p \beta_j event_{i,t+j} + \gamma_t + \varepsilon_{i,t} \quad (2)$$

where  $v_{i,t}$  is a measure of each of the macroeconomic outcomes in country  $i$  and year  $t$ , and  $\alpha_i$  is the country fixed effect. The variable *event* refers to the occurrence of an event related to the discovery of giant deposits of natural resources and is defined as a dummy taking the value of one if an event occurs in country  $i$  and year  $t+j$ .  $\gamma_t$  are time effects included to control for global factors, and  $\varepsilon_{i,t}$  is the error term. Two leads and lags of the dependent variable are included to account for path dependency and control for any anticipation effects. The panel regressions are estimated with Driscoll-Kraay standard errors that are robust to autocorrelation and cross-sectional dependence.

A series of coefficients,  $\beta$ , show the effects of adverse events over  $(k+p+1)$  years, relative to other non-event years, where  $p$  is the number of post-event years included in equation (2). In this exercise, we use  $k = 2$  and  $p = 5$  to provide a longer horizon. This econometric exercise is not intended to uncover any causal relationships. Instead, the objective is to describe how macroeconomic variables evolve around giant resource discoveries.

### Identification of resource discovery events

**Oil and gas discoveries.** Giant oil discoveries are identified using the dataset from Cust, Mihalyi, and Rivera-Ballesteros (2021) and are defined as those with estimated ultimately recoverable reserves of at least 500 million barrels of oil equivalent. In total, 10 giant oil and gas discoveries were identified in five LICs since 1980.

**Minerals discoveries.** Mineral discoveries are identified using the MinEx Consulting Mineral Deposits Database. The database identifies discoveries classified by size as “Moderate,” “Major,” “Giant,” and “Super Giant.” MinEx Consulting maintains a database of more than 62,000 unique mineral deposits worldwide. This

<sup>17</sup> Countries with missing GDP data are excluded from the analysis. As a result, there are at most 20 of 26 LICs and 38 of a possible 42 LTMs (see notes to figures 4.7, 4.8, and 4.9).

includes a comprehensive list of 12,837 unique deposits that are "Moderate" in size or bigger. This includes gold, base metals, diamonds, coal, iron ore, bauxite, potash, phosphate and other deposits. In total, 141 giant mineral discoveries have been identified in 21 LICs since 1980. Three LICs (Burkina Faso, Democratic Republic of Congo, and Mali) account for more than 40 percent of giant mineral discoveries in LICs since 1980.

### ANNEX 4.3 Estimated impact of intense conflict on GDP per capita in LICs

Figure 10B includes a range of estimates of the impact of the onset of intense conflict on GDP per capita in EMDEs after five years (that is, in year  $t+5$ , when  $t$  is the year when a conflict starts). The figure contains several estimates from past literature for country groups that have material overlap with today's LICs. In addition, the figure contains two new estimates for the effect of intense conflict in today's LICs. In the figure legend, these are labelled "LICs 25/m" and "LICs 50/m," signifying an estimate for intense conflict years—defined as 25 battle-related deaths per

million people, and another with the threshold of 50 deaths per million people.

Data on battle-related deaths are constructed from the best estimates of the Uppsala Conflict Data Program. Intense conflict is defined as starting in the first year with battle-related deaths above the threshold, following at least one year with deaths below the threshold. The following regression model is estimated:

$$\begin{aligned}
 y_{i,t+5} - y_{i,t-1} = & \alpha_i + \gamma_t + \sum_{j=1}^3 \theta_j \Delta y_{i,t-j} \\
 & + \sum_{j=1}^3 \theta_j C_{i,t-j} + \beta C_{i,t} + \sum_{j=1}^5 \theta_j C_{i,t+j} \\
 & + \sum_{j=1}^3 \theta_j D_{i,t-j} + \theta D_{i,t} + \sum_{j=1}^5 \theta_j D_{i,t+j} \\
 & + \varepsilon_{i,t+5}
 \end{aligned} \tag{3}$$

where  $y_{i,t}$  is log GDP per capita and  $\alpha_{i,h} + \gamma_{t,h}$  are country and time fixed effects. Three lags of annual GDP growth at  $t$  are included as controls.  $C_{i,t}$  is a dummy variable for the onset of intense conflict, while  $D_{i,t}$  is a dummy variable representing the end of an intense conflict, defined as deaths falling below the conflict threshold for at least 5 consecutive years. Five leads and three lags are included for both  $C_{i,t}$  and  $D_{i,t}$ . Figure 10.B depicts the  $\beta$  estimates, which are statistically significant at the 90 percent level for both thresholds.

**TABLE 4.1 List of all LICs**

	ISO code	Country Name	GNI per capita in 2000	Latest GNI per capita		ISO code	Country Name	GNI per capita in 2000	Latest GNI per capita
1	AFG	Afghanistan*		360**	14	MWI	Malawi	230	640
2	BDI	Burundi	140	230	15	NER	Niger	220	600
3	BFA	Burkina Faso	260	850	16	PRK	Korea, Dem. People's Rep.*		
4	CAF	Central African Republic	250	470	17	RWA	Rwanda	270	980
5	COD	Congo, Dem. Rep.	130	660	18	SDN	Sudan	350	990
6	ERI	Eritrea*	290		19	SLE	Sierra Leone***	140	560
7	ETH	Ethiopia	130	1,130	20	SOM	Somalia	370	610
8	GMB	Gambia, The	570	830	21	SSD	South Sudan*		
9	GNB	Guinea-Bissau	410	900	22	SYR	Syrian Arab Republic	910	
10	LBR	Liberia	190	730	23	TCD	Chad	180	710
11	MDG	Madagascar	280	530	24	TGO	Togo	430	1,030
12	MLI	Mali	280	860	25	UGA	Uganda	270	980
13	MOZ	Mozambique	330	530	26	YEM	Yemen, Rep.*	400	

Sources: WDI (database); World Bank.

Note: GNI per capita, Atlas method (current U.S. dollars). Latest year is 2023 unless stated otherwise. \*Missing data are not publicly available due to insufficient data quality. \*\*Data are for 2022. \*\*\* GDP data for Sierra Leone have recently been re-based and this is expected to lead to a substantial revision of the Atlas GNI series in the near future.

**TABLE 4.2 List of LICs that turned into middle-income countries since 2000**

	ISO code	Country Name	GNI per capita in 2000	Latest GNI per capita		ISO code	Country Name	GNI per capita in 2000	Latest GNI per capita
1	AGO	Angola	360	2,130	22	LSO	Lesotho	590	1,160
2	ARM	Armenia	640	7,330	23	MDA	Moldova	490	6,110
3	AZE	Azerbaijan	630	6,680	24	MMR	Myanmar	190	1,210
4	BEN	Benin	470	1,440	25	MNG	Mongolia	460	4,950
5	BGD	Bangladesh	430	2,860	26	MRT	Mauritania	710	2,150
6	BTN	Bhutan*	720	3,740	27	NGA	Nigeria		1,930
7	CIV	Côte d'Ivoire	640	2,670	28	NIC	Nicaragua	950	2,270
8	CMR	Cameroon	720	1,650	29	NPL	Nepal	220	1,370
9	COG	Congo, Rep.	560	2,470	30	PAK	Pakistan	470	1,500
10	COM	Comoros	730	1,600	31	PNG	Papua New Guinea	600	2,840
11	GEO	Georgia	790	6,680	32	SEN	Senegal	670	1,660
12	GHA	Ghana	330	2,340	33	SLB	Solomon Islands	940	2,270
13	GIN	Guinea	590	1,360	34	STP	São Tomé and Príncipe	480	2,480
14	GNQ	Equatorial Guinea	680	5,240	35	TJK	Tajikistan	170	1,440
15	HTI	Haiti	550	1,740	36	TLS	Timor-Leste	560	2,140
16	IDN	Indonesia	570	4,870	37	TZA	Tanzania	390	1,210
17	IND	India	440	2,540	38	UKR	Ukraine	680	5,070
18	KEN	Kenya	430	2,110	39	UZB	Uzbekistan	630	2,360
19	KGZ	Kyrgyz Republic	280	1,700	40	VNM	Viet Nam	380	4,180
20	KHM	Cambodia*	290	2,390	41	ZMB	Zambia	350	1,320
21	LAO	Lao PDR	280	2,120	42	ZWE	Zimbabwe	360	1,740

Sources: WDI (database); World Bank.

Note: GNI per capita, Atlas method (current U.S. dollars). Latest year is 2023 unless stated otherwise. \* Bhutan and Cambodia data were provided by the respective country teams.



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