Part 1
Middle-Income Transitions

The share of middle-income countries in the global economy is increasing—over half of countries today are middle-income. As classified by the World Bank, 108 countries qualify as middle-income. With about three-fourths of the world’s population, these 108 middle-income countries account for nearly 40 percent of global economic activity. Of every five people in extreme poverty globally, more than three live in middle-income countries. And they generate well over 60 percent of all carbon dioxide emissions (table P1.1). Not surprisingly, they will play a central role in global development, and the difficulties they face should be of global concern. So where are these economies headed?

Notably, the progress of the middle-income countries has slowed in recent decades. The median middle-income economy has income per capita that is less than one-tenth that of the United States. More surprising, this figure has remained almost unchanged for 50 years. Meanwhile, the prospects for middle-income countries are not improving in view of the direction the global economy is going, from healthy to wobbling. Against these headwinds, today’s middle-income countries need to make miracles to develop at the pace of the 34 economies that reached high-income status between 1990 and 2021. And even if these headwinds were not getting stronger, middle-income countries would still face long

Table P1.1  World Bank country classifications and selected global indicators, 2022

<table>
<thead>
<tr>
<th>INCOME CLASSIFICATION</th>
<th>SHARE OF GLOBAL POPULATION (%)</th>
<th>SHARE OF GLOBAL GDP (%)</th>
<th>SHARE OF PEOPLE IN EXTREME POVERTY GLOBALLY (%)</th>
<th>SHARE OF GLOBAL CARBON DIOXIDE (CO₂) EMISSIONS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-income</td>
<td>8.9</td>
<td>0.6</td>
<td>36.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Lower-middle-income</td>
<td>40.3</td>
<td>8.3</td>
<td>55.4</td>
<td>15.7</td>
</tr>
<tr>
<td>Upper-middle-income</td>
<td>35.1</td>
<td>30.3</td>
<td>7.1</td>
<td>48.6</td>
</tr>
<tr>
<td>High-income</td>
<td>15.7</td>
<td>60.8</td>
<td>1.0</td>
<td>35.2</td>
</tr>
</tbody>
</table>


Note: The World Bank currently recognizes 26 economies as low-income (GNI per capita, calculated using the World Bank Atlas method, of US$1,135 or less in 2022); 54 as lower-middle-income (GNI per capita of between US$1,136 and US$4,465); 54 as upper-middle-income (GNI per capita of between US$4,466 and US$13,845); and 83 as high-income (GNI per capita of US$13,846 or more). GDP = gross domestic product; GNI = gross national income.
odds of achieving high-income status because of growth trajectories suggestive of a “middle-income trap.”

Part 1 of this Report examines the evidence for the middle-income trap and asks three questions. First, is growth in middle-income countries slower, with investment-led growth running out of steam (chapter 1, Slowing Growth)? Second, is growth in middle-income countries different, requiring a significant change in growth strategies (chapter 2, Structural Stasis)? And, third, is growth in middle-income countries now harder (chapter 3, Shrinking Spaces)?

Chapter 1 summarizes the evidence on growth slowdowns and highlights that in middle-income countries a majority of growth slowdowns take place as the returns from capital investment diminish sharply. The median growth slowdown episode occurs when a country reaches a little more than 11 percent of the gross domestic product (GDP) per capita level of the United States. Policy and institutional deficiencies exacerbate growth slowdowns; countries with weaker political institutions experience a growth slowdown much earlier, and at lower incomes, than countries with stronger institutions.

Chapter 2 identifies the two successive transitions that middle-income countries must undergo to achieve high-income status. Specifically, countries need to recalibrate their mix of investment, infusion, and innovation as they move through the middle-income status. Pathways to high-income status can differ among countries sectorally and spatially. But they generally involve transitioning first from relying largely on investment in physical and human capital—the mainstay of successful growth at low-income levels of development—to combining investment with the infusion of global technologies and know-how, which applies largely to lower-middle-income countries. This transition is necessary, but it is not enough to move to the high-income level. The second transition involves adding an emphasis on innovation to the mix, which is more applicable to upper-middle-income countries. This mapping of transitions to income levels should be considered indicative. Strictly speaking, it is the structure of an economy that determines the timing of the shift, not its gross national income per capita.

Chapter 3 examines the forces that today are making growth harder to achieve. Foreign trade and investment channels are in danger of becoming constricted by geopolitical tensions. The room for governments to act has shrunk because of multiple crises and populist pressures. And in many middle-income countries, government debt—which is more expensive for this income group than for any other—is at an all-time high. Further complicating matters, fragility, conflict, and violence hamper development in some middle-income countries. And in every country, climate change is putting pressure on the government to rethink its growth strategies.
Key messages

- Today’s 108 middle-income countries represent about 40 percent of the global economy, are home to about 75 percent of the world’s population and more than 60 percent of the world’s poor, and contribute nearly two-thirds of global carbon dioxide emissions.
- Middle-income countries are prone to systematic growth slowdowns—a concept termed the “middle-income trap.” The median growth slowdown episode occurs when a country reaches about 11 percent of the gross domestic product per capita of the United States.
- Although income per capita is the metric most commonly used to measure the pace of economic development, measures of average income can differ greatly, depending on the measure.
- Countries with weaker institutions—and especially those with lower levels of economic and political freedom—are more susceptible to slowdowns at even lower levels of income.

Introduction

The problem of economic growth in middle-income economies has been a concern of development policy practitioners for at least five decades. In the first World Development Report, published in 1978, “middle-income” was an omnibus term applied to countries with diverse economic characteristics at various stages of development.¹ Middle-income countries were defined as those with annual income per capita of over US$250.² By that definition, 58 countries, home to about 900 million people, were designated middle-income. Despite the diversity, World Development Report 1978 identified two characteristics that distinguished middle-income from low-income countries:

- Their growth prospects were more sensitive to economic conditions in the industrialized (high-income) countries, particularly the environment for trade and commercial capital flows.
- They had more resources available to raise the living standards of the poor.

The 1978 Report emphasized the central role of cultivating engineering talent to design products that change continually and rapidly, alongside better organizing workshops and other production facilities so they are made efficiently.³ Interest in the economic growth of middle-income countries rose over the last two decades, especially after a 2007 World Bank regional report on East Asia introduced the term “middle-income trap.”⁴ The term encapsulated the concern that middle-income countries are prone to systematic slowdowns in growth demonstrated, for example, by the economic stagnation in Latin America and the Middle East since the mid-1970s. This chapter assesses whether the experience of the developing world is consistent with this concern. It finds that the majority of growth slowdowns do take place in middle-income countries. The median growth slowdown episode occurs when a country reaches...
about 11 percent of the gross domestic product (GDP) per capita of the United States. This chapter also documents that countries with weaker institutions—and especially those with lower levels of economic and political freedom—are susceptible to slowdowns at even lower levels of income.

Chapter 2 explores a related but relatively qualitative question: Is economic growth during the middle-income stage systematically different from growth in low- and high-income countries? Chapter 3 examines the growing concern that rapidly changing economic conditions and policies in the advanced economies of the North Atlantic will make development in middle-income countries even more difficult.

**Growth in middle-income countries**

The share of middle-income countries in the global economy has increased rapidly since the 1990s, suggesting that it is easier to enter the middle-income stage than to exit it. According to the World Bank’s 2023 income classifications, the 108 current middle-income countries are split evenly between lower- and upper-middle-income countries. Representing about 40 percent of the global economy, middle-income countries are home to about 75 percent of the world’s population and more than 60 percent of the world’s poor. In other words, more than 400 million of the extreme poor globally live in middle-income countries, a statistic that should concern wealthier countries. They also contribute nearly two-thirds of global carbon dioxide (CO₂) emissions (see table P1.1), a statistic that is of global concern.

Over the last three decades, the world’s two most populous countries, China and India, joined the club of middle-income countries, in 1997 and 2007, respectively. It is not surprising, then, that growth in middle-income countries will play a pivotal role in international development.

Since 1990, 34 middle-income economies have transitioned to high-income status (figure 1.1). Thirteen benefited from deep integration with the European Union (EU)—whose economic model features vigorous trade and capital flows, freer enterprise, free worker mobility, stronger institutions, and social inclusion—at a time of relatively rapid economic growth in Western Europe. They benefited greatly from institutional and regulatory reforms that enabled transitions to a market economy, incentivized emerging economies to attract foreign direct investment and infuse new technologies into their production structures while pushing advanced economies to innovate, and fostered an environment for developing a skilled workforce.

Among the other newcomers to high-income status, resource-rich economies such as Chile and Saudi Arabia benefited when they timed policy reforms to coincide with high commodity prices. East Asian economies such as the Republic of Korea and Taiwan, China, stand out for following a path of high savings and investment, enlightened education policies, expansion of trade with export-oriented policies and technology adoption from more advanced economies, and a transition to local innovation well after closing the gaps with the global technology frontier.

For countries that are not fortunate enough to be in the European Union, are not endowed with abundant resources, or are not fiercely focused, progress through the middle-income stage has been slower. The average middle-income economy still has an income per capita less than one-tenth that of the United States (figure 1.2).

It is understandable why middle-income countries are not satisfied with the status quo and why most have plans for faster growth in living standards. China’s 14th Five-Year Plan outlines a vision of achieving the median GDP per capita of developed nations by 2035, with a large increase in the middle class. The vision document also highlights that China’s growth will be driven by major breakthroughs in key technologies, making it one of the most innovative nations in the world, buttressed by a modern economic system with digitalization, thriving cities, and modern agriculture. In India, the prime minister’s vision is to transform
the nation into a developed economy by 2047—the hundredth year of independence. In Viet Nam, its Socio-Economic Development Strategy 2021–2030 outlines a plan to sustain GDP per capita growth of 7 percent through this decade, with a transition to high-income status by 2045. In South Africa, the 2030 National Development Plan has prioritized raising its income per capita from US$2,800 in 2010 to US$7,000 by 2030. Other middle-income countries have similar aspirations.

But the growth prospects of middle-income countries are not improving. Over the last decade, the global economy has gone from healthy to hobbling and from largely integrated to increasingly fragmented. Foreign trade and investment channels are also becoming more constricted—or at least encumbered—by geopolitical tensions.
Meanwhile, the room for governments to act is shrinking due to rapidly changing demographic trends (more rapid than countries had planned for), multiple crises, and populist pressures. In many middle-income countries, government debt—which is more expensive for this income group than for any other—is at an all-time high. And the belated efforts of advanced economies’ central banks to normalize monetary policy and control inflation by raising interest rates has increased sovereign spreads (the difference between bond yields issued on international markets by the country in question versus those offered by governments with AAA ratings) and raised borrowing costs for emerging markets, in some cases to prohibitive levels. As a consequence, middle-income economies are being squeezed from several sides: tighter fiscal space reduces public investment and the cushion for structural reforms; higher public debt service crowds out private borrowing; and a higher risk of sovereign debt distress heightens policy uncertainty and dampens economic activity.

These difficulties are compounded by others. In some middle-income countries, fragility, conflict, and violence are hampering development. And in almost every country, climate change is putting pressure on the government to rethink its development strategy.

Given these headwinds, an economy at the middle-income stage will have to “make a miracle” to develop at the pace of the 34 economies that reached high-income status between 1990 and 2021. That would require having a business sector that facilitates a radical transformation of enterprises, having a government that assuages the growing expectations of an increasingly restless middle class, and having a country transition sooner to less emissions-intensive ways of producing and consuming than those engineered by the middle-income economies of the 1990s.
Even without these headwinds, today’s middle-income countries would still face long odds of achieving high-income status because of what the World Bank has called—since 2007—a “middle-income trap.” Although the term connotes inevitability, the original proposition was that getting mired in the middle stages of development is a possibility, not an inevitability. It would be inevitable only if countries did not adapt their policies and institutions to changing economic and structural needs. The three priorities for middle-income countries to evade the trap and maintain a growth momentum could be summarized as:

- Increasing the sophistication of processes and products through integration into world markets, generally accompanied by the growing specialization of production
- Keeping up with changing education system priorities to help workers acquire skills that enable them to adjust to new technologies and shape new products and processes
- Quickening the pace of innovation by both fostering entrepreneurial activity and keeping markets open to competition.

These tasks have proved to be surprisingly difficult, and they are likely to become even harder.

**Measuring progress through the middle stages of development**

What indicates that an economy is developing? Income per capita is the most commonly used metric to measure the pace of economic development. But measures of average income can differ greatly, depending on the measure. For example, the World Bank, other international organizations, and bilateral aid agencies use GDP per capita at market exchange rates for analysis and lending (box 1.1). On the other hand, the use of GDP per capita based on adjustments for purchasing power parity (PPP, which reflects the purchasing power of a consumer for goods and services) can yield different results.

A comparison of these two sets of measures for Türkiye and Chile illustrates the problem. According to World Bank estimates that use market exchange rates, Türkiye is a middle-income country, and Chile is a

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**Box 1.1 Misunderstanding through misclassification**

The World Bank’s income classification method for grouping countries was first presented in the 1978 *World Development Report*. It introduced groupings of “low-income” and “middle-income” countries using a threshold of US$250 gross national income (GNI) per capita between the groups. The low-income threshold was set in keeping with the guidelines for procurement of goods and services for civil works projects for countries eligible for assistance from the International Development Association (IDA), the organization in the World Bank Group that supports the world’s least developed countries. Specifically, the threshold was based on the “civil works preference” operational guideline for IDA countries.

The process of setting thresholds for income per capita began with finding a “stable relationship” between a summary measure of well-being such as poverty incidence and infant mortality, on the one hand, and economic variables, including GNI per capita estimated using the World Bank’s Atlas method, on the other. Based on such a relationship and the annual availability of the World Bank’s resources, the original income per capita thresholds were established. They were last updated in 1989, using GNI per capita valued

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(Box continues next page)
annually in US dollars based on a three-year average exchange rate and were expanded to four categories:

- **Low-income.** The low-income threshold was officially set in 1988, still based on the value of the IDA’s “civil works preference” and updated for inflation.

- **Lower-middle-income.** The lower-middle-income threshold is based on the operational guidelines cutoff for determining access to 17-year repayment terms for loans through the World Bank Group’s International Bank for Reconstruction and Development (IBRD), although these terms are no longer available. It appears to have first been introduced in the 1983 edition of the *World Development Report*.

- **Upper-middle-income.** The upper-middle-income threshold is the range between lower-middle-income and high-income.

- **High-income.** The high-income threshold does not relate to a cutoff derived from the operational guidelines, but was set at GNI per capita of US$6,000 in 1987 prices in a paper presented to the World Bank’s Board of Executive Directors in January 1989, which also reconfirmed the low- and lower-middle-income threshold levels.

The US$6,000 level has been updated over time for what is called “international inflation,” defined as the average inflation rates of Japan, the United Kingdom, the United States, and the euro area. The choice of the high-income threshold was made to address anomalies in the classification of high-income and industrialized economies used in the World Bank’s World Development Indicators prior to that point.

Under this current classification method, Zambia (with income per capita of US$1,170) and Bulgaria (with income per capita of US$13,250) are both middle-income economies. But few people would disagree with the observation that these countries have had vastly different development experiences and face vastly different growth challenges and trajectories. Yet these income classifications continue to be used widely in the development discourse and in analyses of economic growth. Moreover, although the World Bank may not use the income classifications for operational or lending purposes, other international organizations and bilateral aid agencies do. Given its widespread use, many economists have called for a revision of the current income classification system. The proposals include:

- **Reclassifying levels based on fiscal capacity.** Ravallion (2009) argues that levels of development should be assessed based on countries’ internal capacities for redistribution (through taxes) in favor of their poorest citizens. Similarly, Ceriani and Verme (2014) propose a measure of a country’s capacity to reduce its own poverty levels and show how these tools can be used to guide budget or aid allocations.

- **Reflecting the multidimensional nature of development.** Sumner and Vázquez (2012) use a set of indicators covering definitions of development from four conceptual frameworks (development as structural transformation; development as human development; development as democratic participation and good governance; and development as sustainability) to identify five types of developing countries. Similarly,
high-income country. Yet when adjusted for purchasing power, Türkiye’s GDP per capita is higher than Chile’s. The country for which both measures are defined as identical is the United States because purchasing power in any country is measured relative to what a dollar can buy in the United States. Türkiye’s GDP per capita relative to that of the United States is nearly 50 percent when adjusted for PPP but less than 15 percent using market exchange rates. For Chile, the numbers are, respectively, 40 percent and 20 percent.

PPP adjustments have been criticized for their inability to reflect the complexity and diversity of economic production and capabilities in individual economies. The adjustments do not consider quality or productivity differences among countries in the production of tradable as well as nontradable goods and services, including infrastructure, health care, and education.

However, recent assessments of PPPs appear to be highly correlated with economic activity. A comparison of countries using PPP adjustments could produce a better understanding of the distance to the technology frontier than gross national income. However, income or GDP per capita does not reflect the wide array of growth challenges that countries face. Two high-income countries provide an example. In 2022, Qatar’s GDP per capita was US$88,046, driven mostly by exports of hydrocarbons from its abundant reserves of oil and natural gas. The same year, Denmark’s GDP per capita was US$66,983, and its services sector employs about 80 percent of labor. Meanwhile,
the countries vary significantly in their levels of technical sophistication; in 2021, Denmark was ranked twenty-fourth in the Economic Complexity Index and Qatar eighty-second.¹³

**Growth in middle-income countries is slower**

Economic growth is not a smooth process, and theory does not stipulate that it should be smooth.¹⁴ Instead, economic growth tends to be highly volatile, and long-run growth averages tend to mask periods of success, struggle, and failure.¹⁵ Growth in low- and middle-income countries is an “episodic” phenomenon, with countries experiencing distinct patterns of economic growth.¹⁶ In fact, a key characteristic of economic growth in middle-income countries is its lack of persistence. The volatility of growth rates is even higher in those countries, with sustained growth periods that are typically short-lived, even in countries that historically have enjoyed high growth rates (figure 1.3).

The standout economy—the growth superstar even—is the Republic of Korea, and this Report prominently features its experiences. What was behind its success? As subsequent chapters explain, Korea’s remarkable transformation from a postconflict country in the 1950s to an economy powered by the infusion of ideas from abroad to one that is transitioning to innovation at the global frontiers of technology makes its economic history required reading for policymakers in any middle-income country hoping to achieve high-income levels of living within their lifetimes (box 1.2; see chapter 2 for more information).

Growth slowdowns occur more frequently in middle-income countries than in low- or high-income countries (box 1.3). Research conducted for this Report uses a measure, *proximity to the economic frontier* (leading economies), to clarify

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**Figure 1.3** Sustained growth periods are short-lived, even in rapidly growing economies

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**Source:** WDR 2024 team using data from Maddison Project Database 2023, Groningen Growth and Development Centre, Faculty of Economics and Business, University of Groningen, Groningen, the Netherlands, https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2023.

**Note:** The figure illustrates the growth paths of countries whose average gross domestic product (GDP) growth rate per capita is higher than 5 percent per year for at least eight years.
Box 1.2  A growth superstar: How the Republic of Korea leveraged foreign ideas and innovation

Over the last seven decades, Korea has engineered the most remarkable transformation in recorded economic history. It went from a war-torn, desperately poor country in the 1950s to one of the most prosperous, healthiest, and best-educated countries in the world today. With fewer than 50 million people, it is a global leader in innovation and technology and the tenth-largest economy. What was behind Korea’s success?

First, Korea prioritized openness through export promotion and leveraged the international markets to expose domestic firms to competition. Over time, it reduced tariff barriers and loosened restrictions on foreign investors to open the domestic market to foreign competition. It also promoted private enterprises through policies that first favored the growth and expansion of large conglomerates (efficiency-driven) and then shifted to favor smaller firms and entrepreneurs (equity-driven). Investments in infrastructure helped its rapid economic growth, with physical capital accounting for about 60 percent of growth in the gross domestic product (GDP) between 1990 and 1997. Early investments in information and communication technology infrastructure, amounting to US$32.5 billion between 1995 and 2005 and an additional US$2.6 billion between 2005 and 2014, enabled Korea to leverage new sources of growth driven by digital and technology adoption.

Second, Korea devised public policies to ensure contestability. The government rewarded firms for investments in research and development (R&D) and exports through R&D; it promoted science, technology, and innovation policies; it offered tax incentives; and it adopted export facilitation measures. Korea’s spending on R&D jumped from 0.5 percent of GDP in 1980 to 1.6 percent in 1990 when Korea was still an upper-middle-income country. Private R&D expenditures increased by an unprecedented 26 times from 1980 to 1990 and exceeded 80 percent of total R&D spending by the end of the 1990s. In parallel, Korea invested heavily in human capital and ensured that job creation was matched with the needed supply of skills at the different stages of development—vocational and technical secondary, STEM (science, technology, engineering, and mathematics) education, and R&D accelerators—which was carried out more effectively than by much richer countries.

Third, Korea got better at regulating the relationships among large, medium, and small firms. Initially, large firms were favored as the instrument for infusing new technologies into the economy. But by the mid-1990s the limits of this approach had become obvious, and yet powerful incumbents stymied the efforts of policy makers to change course. The 1997 Asian financial crisis changed the balance of power, and Korea established a new state–market relationship by adopting reforms to strengthen (1) financial market institutions with greater oversight and rules that diminished distortions; (2) competition policies that ended tacit government support for market collusion and concentration of market power; and (3) a pro-entrepreneurship policy regime with improved financing mechanisms for domestic technology ventures. The effectiveness of all of these policies was enhanced by stronger bureaucratic capacities, anticorruption initiatives, more transparent legal frameworks, better coordination mechanisms, and monitoring and evaluation systems.

Sources: Kim 2006; Soh, Koh, and Aridi 2023.
Box 1.3 Identifying growth slowdowns

Several studies have examined the reasons for growth slowdowns. Eichengreen, Park, and Shin (2011) identify frequent slowdowns in middle-income countries. They define a slowdown as a decline in the seven-year average growth rate of gross domestic product (GDP) per capita by at least 2 percentage points, with growth being higher than 3.5 percent in the preceding years. In addition, they limit slowdowns to cases in which GDP per capita is greater than US$10,000 in 2005 constant international prices adjusted for purchasing power parity (PPP). They discover slowdowns when GDP per capita reaches about US$16,540 (in 2005 constant international PPP prices). Extensions of the analysis indicate that growth in middle-income countries slows even at points early in the middle-income stage: specifically, in the range of US$10,000–US$11,000 GDP per capita (in 2005 constant prices) and in the range of US$15,000–US$16,000 (in 2005 constant prices).

Eichengreen, Park, and Shin (2011) find that slowdowns are driven largely by low productivity growth. They also find that the probability of middle-income traps is higher in countries with high investment rates, high old-age dependency ratios, under valued real exchange rates that translate into a barrier to move up the technology ladder. In addition, they find that the level and structure of human capital, the level and structure of exports (specifically, the relative importance of low- and high-tech exports), financial and political stability, and external shocks are among the significant correlates of slowdowns.

Aiyar et al. (2013) define the middle-income trap as a special case of growth slowdowns. They distinguish between natural slowdowns in growth and unusually severe slowdowns. Although economies in all income groups experience growth slowdowns, based on their analysis covering 1960–2005 middle-income countries are especially vulnerable to growth slowdowns. They point to steep drops in the growth of total factor productivity (TFP) as a key driver of such slowdowns. Spence (2011) also finds slowdowns clustering in a narrow band of countries with income per capita of between US$5,000 and US$10,000.

Im and Rosenblatt (2013) focus on the probability of a country transitioning to the next income category. They find that the transition from upper-middle- to high-income status is just as likely as the transition from lower-middle- to upper-middle-income status. They argue that income per capita relative to the frontier stagnates after reaching middle-income status (for both lower-middle- and upper-middle-income countries). Their analysis suggests that it will take a century or more for middle-income countries to catch up to high-income countries if middle-income economies grow by 3–4 percent in per capita terms, assuming that the growth rate of high-income countries proceeds at the world average, which is 1.8 percent.

Robertson and Ye (2013) identify the middle-income trap as an ailment in which a country’s GDP per capita is time-invariant and stays in the middle-income range, defined as between 8 percent and 36 percent of GDP per capita of the United States.

a. The old-age dependency ratio is the ratio of older dependents (age 65 and over) to the working-age population (ages 15–64).

b. Total factor productivity, a concept created by Robert Solow, is an equation used in economics to measure the impact of technological advancements and changes in worker knowledge. It attempts to measure the effects that these changes have on the long-term output of an economic system.

c. A time-invariant variable refers to a variable whose value does not change across time.
the distribution of growth slowdowns along the national income spectrum around the world. The frontier represents the growth leader: the country with the most advanced combination of economic production, innovation, and workforce. For this analysis, the United States is used as a proxy for the frontier. Technically, a growth slowdown is defined as a break in the time series of the growth rate of GDP per capita, whereby the growth following the break is distinctly lower than the growth preceding it. Proximity to the frontier is the ratio of a country’s GDP per capita to that of the frontier country (the United States) each year (not adjusted for differences in PPP).

Measured by their proximity to the frontier, the types of countries that experience growth slowdowns vary widely. When they enter a slowdown, their proximity to the frontier can range anywhere from just above 0 percent all the way to 150 percent. The median growth slowdown episode occurs in a country-year with just 11 percent proximity to the frontier, and the mean episode occurs at 21 percent proximity to the frontier—approximately the 75th percentile in the distribution. Together, these median and mean measures imply that a majority of growth slowdowns take place in middle-income countries (figure 1.4). In fact, a middle-income country is three times as likely to experience a growth slowdown compared with a high-income country.

Using the World Bank’s Long Term Growth Model (LTGM), figure 1.5 sheds more light on growth slowdowns in low- and middle-income countries. Assuming a “business as usual” baseline, where the growth drivers (ratios of public investment to GDP and private investment to GDP, total factor productivity, human capital, and labor force participation rates) follow their historical or recent trends, most low- and middle-income countries are forecasted to experience significant slowdowns as they approach the economic frontier country (the United States) over 2023–2100. In addition, middle-income countries whose growth has already significantly slowed, such as Argentina, Bulgaria, and Mexico, are expected to diverge from the economic frontier over the next 70 years. This is an unfortunate outcome because the key drivers of growth—savings, investment, productivity, human capital, and demographics—are already running out of steam.

Although researchers continue to debate the existence of a middle-income trap along the lines of that first flagged by the World Bank in the mid-2000s, policy makers in middle-income economies generally consider it a serious possibility. Their concerns are the motivation for this Report.

Developing countries should also seriously consider the close correlation between the quality of institutions and the probability of falling into the trap. Economists have conjectured that poor institutional quality discourages investment and innovation, distorts allocation, and lowers returns to entrepreneurship. And policy and institutional deficiencies can put the brakes on and even derail development. Research conducted for this Report reveals that countries with weaker political institutions—measured in many ways—experience growth slowdowns at lower levels of development than countries with stronger ones (figure 1.6). Panel a of figure 1.6 suggests that civil liberties may influence the overall conditions for investment, innovation, and growth.
Figure 1.5  Growth is expected to slow down as countries approach the economic frontier (United States)

Source: WDR 2024 team.

Note: The dashed lines represent countries that will experience a divergence from the frontier over 2023–2100, although they were closer to the frontier in 2022. The solid lines indicate a convergence to the frontier over 2023–2100. These projections are based on extrapolation of recent historical trends using the World Bank’s Long Term Growth Model. GDP = gross domestic product.

Figure 1.6  Weak institutions hasten and worsen growth slowdowns

Source: Chikis 2024.

Note: The empirical distribution function for growth decelerations is as defined in Kar et al. (2013). Gross domestic product (GDP) is measured using market exchange rates. Proximity to the frontier indicates a country’s GDP per capita relative to US GDP per capita. In panel a, political institutions are based on scores for “civil liberties” and “political rights” from Freedom House. In panel b, the plots of economic freedom use data from the Heritage Foundation Index of Economic Freedom. Countries with scores above the median are freer. That methodology identifies slowdowns in 69 countries between 1972 and 2010. See Countries and Territories (dashboard), Freedom House, Washington, DC, https://freedomhouse.org/countries/freedom-world/scores; Index of Economic Freedom, 30th Edition (dashboard), Heritage Foundation, Washington, DC, https://www.heritage.org/index/.
Countries with weaker economic freedoms also experience growth slowdowns while remaining far from the global frontier (figure 1.6, panel b). In other words, policy makers in middle-income countries should be mindful of the possibility that tighter economic restrictions may mean forgoing opportunities to close the gaps in living standards between their own economies and the more advanced economies in North America, Northeast Asia, Western Europe, and Oceania.

Notes
2. Four member countries of the Organisation for Economic Co-operation and Development (OECD)—Greece, Portugal, Spain, and Türkiye—were included among the middle-income countries. The other OECD member countries were placed in the industrialized (high-income) group.
3. Engineering talent and organizational structure are central themes of this Report, which underpins an expansive economics literature on creative destruction (Aghion and Howitt 1992; Aghion et al. 2019; Grossman and Helpman 1991; Segerstrom, Anant, and Dinopoulos 1990). The central feature of the Industrial Revolution and its aftermath was the gradual shift from tacit knowledge (as embodied in craftsmanship and simple production techniques) to more formal knowledge created by mathematicians, physicists, chemists, medical doctors, and people schooled in engineering science (Mokyr 2023).
5. The 34 economies that transitioned to high-income status since 1990 are American Samoa (United States); Antigua and Barbuda; Bahrain; Barbados; Chile; Croatia; Czechia; Estonia; Gibraltar; Greece; Guam; Guyana; Hungary; Isle of Man; the Republic of Korea; Latvia; Lithuania; Macao SAR, China; Malta; New Caledonia; Northern Mariana Islands; Oman; Panama; Poland; Portugal; Puerto Rico (United States); Romania; Saudi Arabia; the Seychelles; the Slovak Republic; Slovenia; St. Kitts and Nevis; Trinidad and Tobago; and Uruguay.
6. Taiwan, China, transitioned to high-income status before 1990.
7. Kose and Ohnsorge (2024).

References


