A Resurgent East Asia
Navigating a Changing World

Andrew D. Mason
Sudhir Shetty

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A Resurgent East Asia
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Known for their economic success and dynamism, countries in the East Asia and Pacific region must tackle an increasingly complex set of challenges to continue on a path of sustainable development. Learning from others within the region and beyond can help identify what works, what doesn’t, and why, in the search for practical solutions to these challenges. This regional flagship series presents analyses of issues relevant to the region, drawing on the global knowledge and experience of the World Bank and its partners. The series aims to inform public discussion, policy formulation, and development practitioners’ actions to turn challenges into opportunities.

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A Resurgent East Asia

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Andrew D. Mason
Sudhir Shetty
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East Asia continues to be the global exemplar for development success. Over the past half century, a succession of countries across the region has progressed from low-income to middle-income and even to high-income status. This dramatic transformation of the region—termed the “East Asian Miracle”—has been built on a combination of policies that fostered outward-oriented, labor-intensive growth while building basic human capital and providing sound economic governance. This development strategy has delivered rapid and sustained growth, which has moved hundreds of millions of people out of poverty and into economic security.

Yet East Asia’s economic resurgence remains incomplete. More than 90 percent of its people now live in 10 middle-income countries, many of which can realistically aspire to high-income status in the next generation or two. But these countries are still much less affluent and productive than their high-income counterparts. China’s per capita income is still only about one-fifth of the average in high-income economies, while Cambodia’s per capita income is about 3 percent of the high-income average. Significant gaps also exist in labor productivity and human capital levels. When the Republic of Korea achieved high-income status, for instance, its labor productivity was two and a half times higher and its human capital one-third higher than those of China today.

This study—A Resurgent East Asia: Navigating a Changing World—is about how the region’s middle-income countries will need to adapt their development model to support their transition to high-income status in the face of evolving global and country circumstances. Slowing growth in global trade and shifts in its patterns, rapid technological change, and evolving economic circumstances within countries all present challenges to sustaining productivity growth, fostering inclusion, and enhancing state effectiveness.

The study examines the nature of these challenges and delineates how policy makers across developing East Asia will need to address them in the coming decade. While the region’s focus on a combination of outward-oriented growth, human capital development, and sound economic governance—the East Asian development model—still has much to recommend it, this strategy will need to be adjusted to changing times. The study highlights policy reforms under five pillars: boosting economic competitiveness, building skills, promoting inclusion, strengthening state institutions, and financing the transition to high income.

Policy makers in the region will need to address both familiar and novel challenges. This will include focusing on both emerging policy priorities, reforms that require special emphasis as countries transition to high-income status, and foundational policies, reform areas that countries have already been
pursuing and that remain critical to sustaining development.

For boosting economic competitiveness, the emerging priorities include the following: reforming services sectors, deepening trade agreements, broadening innovation policies, and improving the access of small and medium enterprises to finance. To build skills, the focus needs to be on developing higher-order cognitive and socioemotional skills, supporting continuous skills development systems, and enhancing people’s digital and technical capabilities. To promote inclusion, it will be important to strengthen employment services, link unemployment benefit schemes to economic transitions, and enable affordable access to digital technologies. Strengthening state institutions will require a greater emphasis on expanding mechanisms for citizens’ voice and participation, increasing government transparency, and strengthening systems of checks and balances. Financing the transition to high-income status will require measures to increase domestic resource mobilization, including expanding the tax base and limiting tax competition, to sustainably finance the needs and aspirations of increasingly middle-class societies.

_A Resurgent East Asia_ argues that policymakers across the region need to act decisively or risk missing opportunities to sustain the region’s remarkable development performance. Although the precise nature and pace of change are uncertain, their direction is not. This serves only to increase the urgency of reform so that developing East Asia can achieve even greater and more broadly shared prosperity.

Victoria Kwakwa
Regional Vice President
East Asia and Pacific Region
The World Bank
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Abbreviations

ABS  Asian Barometer Survey
AI   artificial intelligence
ALMP active labor market program
APEC Asia-Pacific Economic Cooperation
API  application public interface
ASEAN Association of Southeast Asian Nations
ASPIRE Atlas of Social Protection Indicators of Resilience and Equity
BKN  Badan Kepegawaian Negara (Indonesia’s State Civil Service Agency)
BRICS Brazil, Russian Federation, India, China, and South Africa
BTI  Bertelsmann Transformation Index
CAT  computer-assisted testing
CGIAR Consultative Group on International Agricultural Research
CHN  China
CPTPP Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CSO  civil society organization
DAI  Digital Adoption Index
DNA  deoxyribonucleic acid
DRC  Development Research Center
DRM  domestic resource mobilization
EGRA Early Grade Reading Assessment
EIA  economic integration agreement
EU   European Union
FDI  foreign direct investment
FTA  free trade agreement
FVA  foreign value added
GDP  gross domestic product
GII  Global Innovation Index
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<td>GIZ</td>
<td>German Agency for International Cooperation</td>
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<tr>
<td>GNI</td>
<td>gross national income</td>
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<tr>
<td>GSO</td>
<td>General Statistics Office of Vietnam</td>
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<td>GVC</td>
<td>global value chain</td>
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<td>HIC</td>
<td>high-income countries</td>
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<tr>
<td>IBP</td>
<td>International Budget Partnership</td>
</tr>
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<td>IBRD</td>
<td>International Bank for Reconstruction and Development</td>
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<tr>
<td>ICIO</td>
<td>Inter-Country Input-Output</td>
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<tr>
<td>ICT</td>
<td>information and communications technology</td>
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<td>IDN</td>
<td>Indonesia</td>
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<tr>
<td>IFC</td>
<td>International Finance Corporation</td>
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<td>IGM</td>
<td>intergenerational mobility</td>
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<tr>
<td>ILO</td>
<td>International Labour Organization</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>INSEAD</td>
<td>Institut Européen d’Administration des Affaires (European Institute of Business Administration)</td>
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<tr>
<td>IoT</td>
<td>internet of things</td>
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<tr>
<td>IPUMS</td>
<td>Integrated Public Use Microdata Series</td>
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<td>IRRI</td>
<td>International Rice Research Institute</td>
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<td>IT</td>
<td>information technology</td>
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<tr>
<td>ITC</td>
<td>International Trade Centre</td>
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<tr>
<td>IZA</td>
<td>Institute of Labor Economics</td>
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<td>KHM</td>
<td>Cambodia</td>
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<tr>
<td>LACEX</td>
<td>Labor Content of Exports</td>
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<td>LMIC</td>
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<td>MRIO</td>
<td>multiregion input-output</td>
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<td>NGO</td>
<td>nongovernmental organizations</td>
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<td>NIE</td>
<td>newly industrializing economies</td>
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<td>NIS</td>
<td>National Innovation System</td>
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<td>NRGI</td>
<td>Natural Resource Governance Institute</td>
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<td>Organisation for Economic Co-operation and Development</td>
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<td>OGI</td>
<td>Open Governance Initiative</td>
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<td>Public Expenditure and Financial Accountability</td>
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<td>Philippines</td>
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<td>PISA</td>
<td>Programme for International Student Assessment</td>
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<td>PPP</td>
<td>purchasing power parity</td>
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<td>PTA</td>
<td>preferential trade agreement</td>
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<td>PWT</td>
<td>Penn World Table</td>
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<td>QoG</td>
<td>Quality of Government</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<td>R&amp;D</td>
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<td>RCA</td>
<td>revealed comparative advantage</td>
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<td>rice crop manager</td>
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<td>RULC</td>
<td>relative unit labor costs</td>
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<td>State Administration of Taxation</td>
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<td>Skills Toward Employment and Productivity</td>
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<td>STRI</td>
<td>Services Trade Restrictiveness Index</td>
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<td>total factor productivity</td>
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<td>Thailand</td>
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<td>Trends in International Mathematics and Science Study</td>
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<td>TiVA</td>
<td>Trade in Value Added</td>
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<td>TPP</td>
<td>Trans-Pacific Partnership</td>
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<td>TVET</td>
<td>technical and vocational education and training</td>
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<td>UDB</td>
<td>Unified Database (Indonesia)</td>
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<td>upper-middle-income countries</td>
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<td>UNIDO</td>
<td>United Nations Industrial Development Organization</td>
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<td>United States</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>VAT</td>
<td>value added tax</td>
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<td>VCP</td>
<td>Vietnam Communist Party</td>
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<td>VNM</td>
<td>Vietnam</td>
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<td>WDI</td>
<td>World Development Indicators</td>
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<td>WGI</td>
<td>Worldwide Governance Indicators</td>
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<td>WIPO</td>
<td>World Intellectual Property Organization</td>
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<td>World Justice Project</td>
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<td>WTO</td>
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Introduction

East Asia’s renaissance has continued. A succession of East Asian economies have progressed from low-income to middle-income status in the past half century. Since 2000, the region’s middle-income economies have become more prominent. Part of this shift mirrors the rise of China, which is now the world’s largest (in purchasing power parity [PPP] terms) or second-largest economy (at market prices). But it also reflects the emergence of the five large Association of Southeast Asian Nations (ASEAN) middle-income economies: Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. Incomes in the region have grown rapidly, and poverty has fallen dramatically. The scale of this success has been termed the “East Asian Miracle” because of the sheer pace of the transformation. A half century ago, countries across much of the region faced some of the most difficult development challenges in scale and scope. Most were poor agricultural economies, struggling to overcome legacies of conflict or central planning. Today, however, the region is bustling with economic activity—reflecting a lively mix of high- and middle-income economies that account collectively for nearly one-third of global gross domestic product (GDP).

Yet East Asia’s resurgence remains incomplete. More than 90 percent of its people live in 10 middle-income countries. Although several of these countries can now realistically aspire to high-income status within the next generation or two, they are far from affluent. Despite China’s spectacular growth over the past 40 years, for instance, its per capita income is still only about a fifth of the average for high-income economies. Among the region’s economies at the lower end of the middle-income scale, per capita incomes in Cambodia and Vietnam are about 3 percent and 5 percent, respectively, of the high-income average. These large gaps in standards of living are equally striking when viewed in historical terms: China’s per capita income fell from about 36 percent of the level of the United States in 1820 to 20 percent in 1870, and although it has risen significantly since China’s economic reforms began in the late 1970s, it is still less than a quarter of the U.S. level today.

Developing East Asia also lags in labor productivity and human capital relative not only to the United States but to Chile and the Republic of Korea when those countries attained high-income status (in 2011 and 2001, respectively). For instance, when Chile and Korea achieved high-income status, their
labor productivity levels were, respectively, almost 2 and 2.5 times that of China in 2015. Human capital levels in Chile and Korea were a quarter and a third higher, respectively. Other middle-income East Asian economies similarly lag behind the human capital and labor productivity levels of Chile and Korea when they first attained high income. Moreover, productivity growth in the region has been slowing, as in other parts of the world.

Despite its recent success, developing East Asia’s continued resurgence will depend on its ability to navigate the currents of a changing world and a changing region. Global trade is growing more slowly, and the patterns of trade are shifting, both within and beyond the region. Technology is changing rapidly and, in so doing, is changing the nature of comparative advantage as well as the structure of demand for labor in the region. And the countries’ economies themselves are changing as they become more prosperous. Indeed, it is these changes that help frame the challenges the region will face—challenges that can be addressed, but only through a combination of forward-looking policy actions and renewed energy for reform.

The East Asian development model has worked

The “growth with equity” model

The success of developing East Asia in sustaining development can be attributed broadly to a set of policies that have come to be known as the “growth with equity” model. Broadly speaking, this strategy consists of three pillars: outward orientation, investment in basic human capital, and sound economic governance. This broad-brush characterization obviously abstracts from many aspects of country-specific development strategies as well as variations in the pace and sequencing of policies across countries. Nevertheless, it captures the essential elements of the approach this set of countries took as well as its contrast to the strategies adopted by low- and middle-income economies elsewhere, particularly in Latin America and South Asia.4

Outward orientation. Recognizing that labor was their most abundant asset in their early stages of development, these economies promoted labor-intensive growth in ways that helped integrate them with the global economy. As they developed their manufacturing sectors early on, they did so without taxing labor heavily or discriminating significantly against agriculture. Support for agricultural productivity growth was key because it helped sustain growth and reduce poverty. Policies to promote trade openness helped expose domestic industries to international competition while facilitating flows of foreign investment and know-how.

Investment in basic human capital. All the successful East Asian economies emphasized the provision of services to build the human capital of their populations. Basic education, health and nutrition, and family planning services were promoted both as a means of raising labor productivity and as a way of enabling the poor to benefit from labor-intensive growth. Educational systems achieved broad access to primary and, increasingly, to secondary schooling. As a result, the generation born in the 1980s had educational attainment almost a third higher than that born in the 1950s. Health care provision focused on diseases that particularly affected the poor, including by providing primary health care and targeting rural areas. Several countries also made improving access to family planning programs a priority.

Sound economic governance. These economies also recognized that for development to be sustained, policies needed effective implementation. This in turn called for credible and capable economic governance. East Asia’s policy makers generally remained committed to maintaining macroeconomic stability (including long-term fiscal discipline) and to relying primarily on markets in allocating resources. When interventions (so-called industrial policies) were used, they were designed to be consistent with market signals and incentives. Good economic governance also relied on the development of at
least small groups of well-trained, competent civil servants who were largely shielded from political interference.

**A record of success**

This development model has resulted in sustained productivity growth, inclusion, and effective economic governance across developing East Asia.

**Income and productivity growth**

Countries in the region have generally grown steadily and consistently over the past quarter century (figure O.1). China’s rapid and consistent growth over this period has obviously been a big part. But the growth story extends beyond China, and as a result, all of the countries that constitute “developing East Asia” have now reached middle-income status, with several of them now in the upper-middle-income ranks. This is a far cry from two decades ago, when the region’s countries were predominantly low- to lower-middle-income.

Developing East Asia’s growth performance has also been striking in its resilience despite two major economic crises over the past two decades. Although the 1997–98 Asian Financial Crisis originated in the region and was a severe shock, its effects on growth were relatively short-lived, even in Indonesia, Malaysia, and Thailand—the countries that were most affected besides Korea. By 1999, growth was positive again across the region, and it continued to rise throughout the first part of the following decade.

The region then weathered the 2008–09 Global Financial Crisis, which began in the high-income economies, much better than did most other low- and middle-income regions. China’s public investment-led stimulus helped sustain its own growth and, through its trade links, supported growth in the rest of developing East Asia as well. For much of the decade since that crisis, East Asia has been the fastest-growing developing region. Since 2010, it has grown by nearly 6.5 percent a year, on average—not much slower than its 2000–07 pace. As a result, developing East Asia’s GDP is now more than three and a half times what it was in 2000. Even leaving aside China, developing East Asian countries have more than doubled their GDP since 2000.

Strong productivity growth was the key to much of developing East Asia’s success in sustaining growth over this prolonged period. Levels of output per worker have been converging to the “productivity frontier”—that of the United States—reflecting to varying extents across countries the roles of capital deepening (more capital per worker), the accumulation of human capital (more educated and healthier workers), and growth in total factor productivity (greater economic efficiency). And in most cases, productivity growth has been faster and more consistent in developing East Asia than in other major low- and middle-income countries.

**Inclusion**

Rapid growth has provided broad-based benefits to East Asia’s population. First, and most significantly, the shares of the extreme and moderate poor in the region’s population have fallen from over half in 2002 to less than an eighth in 2015 (figure O.2). While China has led the way in this reduction—with its

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**FIGURE O.1** Real GDP growth has been high in developing East Asia, 1991–2016


Note: “Developing East Asia” includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. GDP = gross domestic product.
rate of extreme and moderate poverty now below 7 percent (down from about 58 percent in 2002)—the improvements have cut across the region. Malaysia and Thailand have virtually no extreme or moderate poverty by these measures. Indonesia has more than halved the share of its population in these categories since 2002—to about 31 percent in 2016. And Vietnam has reduced its share of poor to just over 8 percent in 2016, down from almost 70 percent in 2002.

Economic governance
The region’s reputation for credible and capable economic management can be seen by looking at “government effectiveness,” which is a composite measure 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.” Much of developing East Asia does well on this indicator relative to other middle-income countries, a significant change from the mid-1990s, when developing East Asia ranked significantly below other lower-middle- and upper-middle-income countries (figure O.3). By 2016, the region’s overall ranking had surpassed that of middle-income country comparators (although specific countries differ in their rankings).

Changing times, rising challenges
Changes in the global economic environment, coupled with shifts in the countries themselves, are raising questions about the continued efficacy of the East Asian “growth with equity” model in underpinning the region’s transition from middle-income to high-income status. Slowing growth in global trade and shifts in its patterns, rapid technological change, and evolving economic circumstances within countries all present challenges to sustaining the past success in spurring productivity growth, fostering inclusion, and enhancing the effectiveness of the state.
Slowing productivity growth

As noted earlier, East Asia’s development model has helped sustain strong productivity growth for decades. Macroeconomic stability enabled countries to attract foreign direct investment (FDI) and remain resilient to shocks over time. Policies that favored export-oriented manufacturing also facilitated structural change, allowing labor to move from relatively low-productivity (mostly subsistence) agriculture to manufacturing. And human capital investments, with their focus on basic education, prepared significant shares of the population to contribute to export-oriented growth. Since the early 2000s, within-sector productivity growth has also been a driving force in East Asian economic growth, owing to increased participation in global and regional value chains as well as to manufacturing innovations supported by FDI inflows and the progressive deepening of the region’s capital markets following the Asian Financial Crisis.

As in much of the world, however, productivity growth appears to have slowed across developing East Asia in the aftermath of the Global Financial Crisis. A key challenge will thus be to reactivate productivity growth in the face of a changing global and regional environment by addressing ongoing weaknesses in trade, innovation, and financial sector policies.

Trade integration is flagging

The slowing of global trade is a major challenge to further integration as a force for productivity growth (figure O.4). Beyond the effects of the Global Financial Crisis, the relationship between trade and income appears to have weakened over time. Several factors have been put forward for the slowing growth in global trade: (a) the maturing of global and regional value chains in the 2000s, partly because of technological change; (b) changes in the composition of GDP, particularly the falling share of investment in GDP; and (c) the slowing pace of trade liberalization and the recent rise of protectionism, including the possibility of trade wars.

Although each of these interrelated factors has played a role in the global trade slowdown, recent analysis indicates that the most significant contributor is the decreased pace of expansion of global value chains in the 2000s, especially since the Global Financial Crisis (Constantinescu, Mattoo, and Ruta 2018).

This challenge is exacerbated by two weaknesses in the trade regimes of many countries in the region. First, the economies of developing East Asia have pursued open trade policies for goods but have been much less willing to open their services sectors to trade and foreign investment flows, even between each other. This asymmetric opening of East Asia’s trade between goods and services is illustrated in figure O.5, which maps countries’ levels of tariff protection on goods against a measure of services sector protection. Other than Cambodia and Mongolia, all countries in the region are in the upper-left quadrant of the figure (or close to it), indicating that their levels of tariff protection on goods are at or below the global median, whereas their
levels of services sector protection are above the global median.

Services trade can be a powerful engine for productivity growth, including through its effects on extending value chains and its links with ongoing technological change. Services sector reforms in several low- and middle-income countries—such as fewer restrictions on foreign firm entry, ownership, and operations—have led to growth in both domestic and foreign investment. Local manufacturing firms are no longer at the mercy of inefficient (public or private) monopolies and have access to better, newer, more reliable, and more diverse business services and technologies via a wider range of domestic and foreign providers.

The second weakness in these countries’ trade regimes is that, despite their increasing numbers (36 at last count), East Asia’s preferential trade agreements (PTAs) are generally “shallow.” For example, even some policy areas covered by World Trade Organization agreements—such as public procurement, subsidies, and state trading companies—are not included in most East Asian PTAs.

This lack of depth in the region’s trade agreements matters for productivity growth because it has reduced the pressures to further lengthen value chains. Signing “deep” PTAs doubles trade in parts and components and increases reexported value added by about 22 percent (Laget et al. 2018). The intuition is that when trade agreements extend to areas such as protection of foreign investment and intellectual property rights and stronger competition policies, they contribute to greater specialization, which in turn is linked to higher productivity.

FIGURE O.5 Trade restrictions on services remain high in developing East Asia

Source: Constantinescu, C., A. Mattoo, and M. Ruta, “Trade in Developing East Asia: How It Has Changed and Why It Matters,” background paper for this study (World Bank, Washington, DC, 2018).
Note: The figure shows average tariff rates on the x axis and the World Bank Services Trade Restrictiveness Index (STRI), which ranges from 0 to 100, on the y axis (circa 2011). The horizontal line indicates the STRI global median; the vertical line indicates the global median tariff rate. Developing East Asian countries shown (in light blue) are Cambodia (KHM), China (CHN), Indonesia (IDN), Malaysia (MYS), Mongolia (MNG), the Philippines (PHL), Thailand (THL), and Vietnam (VNM).
Innovation is constrained
Reduced potential for manufacturing growth, arising in part from technological change, may limit innovation as a force for productivity growth. The shares of manufacturing value added and employment have been peaking both at lower levels and at lower per capita incomes than in earlier periods. In most of today’s high-income economies, the peak share of manufacturing employment was almost twice as high as in today’s lower-middle-income economies—a pattern seen in East Asia, too. Moreover, the share of manufacturing in GDP has fallen globally and in East Asia, in both high-income and middle-income countries. One reason could be that technological change is leading to professional service inputs making up an increasingly large share of manufactures, which in turn is resulting in some reshoring of manufacturing to more-advanced economies (Hallward-Driemeier and Nayyar 2017). If this “premature deindustrialization” trend is real and persists, it does not augur well for the ability of East Asia’s lower-middle-income countries to emulate their more affluent predecessors’ success in relying on manufacturing exports to propel growth.

Technological change—the spread of information and communications technology (ICT) (termed “Industry 3.0” in reference to the third industrial revolution) as well as the emergence of new physical, biological, and advanced digital technologies (termed “Industry 4.0”)—is also likely to continue. This trend could further solidify the advantages of the high-income economies and China, which remain the dominant exporters across major manufacturing sectors. It could also further weaken the impetus for manufacturing-led productivity growth in the region’s middle-income economies (other than China). In all five of the main manufacturing sector groups (low-skill, labor-intensive tradables; medium-skill global innovators; high-skill global innovators; commodity-based regional processing; and capital-intensive regional processing), most of the top 10 exporters are still high-income economies, along with China (Hallward-Driemeier and Nayyar 2017). Emerging technologies could also lead to the reshoring of production by reducing the importance of wage competitiveness (with robotics and the move to “smart factories”), limiting the potential for scale economies with an emphasis on customization (with 3-D printing), and expanding the role of services in the manufacturing process. Although these technologies are still nascent, their potential could pose a challenge for developing East Asia (other than China) to spur productivity by deepening its manufacturing footprint.

Analysis of the Global Innovation Index (GII) indicates that while much of developing East Asia performs at or above levels corresponding to their income levels, their national innovation systems must be upgraded if innovation is to contribute more significantly to productivity growth. Although investment in research and development is important to fostering innovation, a broader set of enabling factors is needed for an effective national innovation system (Cirera and Maloney 2017). These comprise (a) factors that support the accumulation of knowledge and other forms of capital; (b) firm capabilities and incentives to innovate, including management capabilities and protection of intellectual property; and (c) government capabilities to formulate and implement innovation policies.

Countries in developing East Asia will therefore need to address multiple constraints, albeit in a phased manner, to ensure that innovation continues to contribute to raising firm-level productivity growth. Detailed analysis of the GII highlights which challenges are likely to be binding in each of the seven East Asian countries included in the GII rankings. All except Malaysia rank lower in innovation than the GII’s median country and below the level predicted by their per capita GDP on at least one of the GII’s five “input” pillars: institutions, human capital and research, infrastructure, market sophistication, and business sophistication (table O.1). Cambodia, Indonesia, and Thailand stand out as falling short on most or all of the different pillars. Looking across pillars, most of the seven countries
underperform on institutions and, to a lesser extent, on human capital and business sophistication. Unbundling each of these pillars as defined in the GII shows where the shortfalls are most pronounced. On institutions, for example, shortfalls are most marked with respect to countries’ regulatory and business environments, with indicators in all countries in the region (including Malaysia, on regulation) falling below both the median country’s ranking and the income-predicted benchmarks.

**Access to finance is limited**

Capital markets in the larger developing East Asian economies have been deepened since the Asian Financial Crisis through growth in issuance activity, increased use of equity and corporate bond issues, and broader use of domestic markets relative to international and intraregional markets. These developments have boosted productivity through better access to capital for large firms. They have also helped to make financial systems more resilient to some of the risks that precipitated the crisis. Despite these important developments, access to capital markets still tends to be restricted to only the largest firms.

Small and medium enterprises (SMEs) remain important contributors to employment and output in most of the region’s economies, however. In the economies at the lower end of the middle-income spectrum, such as Cambodia, enterprises that employ fewer than 100 persons account for almost 60 percent of total sales and almost three-quarters of total employment in the industrial and services sectors. Even in Indonesia and the Philippines, more than two-thirds of total sales and 37 and 58 percent of total employment, respectively, are accounted for by enterprises with fewer than 100 employees. At the same time, these enterprises are more likely than large firms to cite access to finance as among the most significant constraints they face.

However, success in improving SME access to finance in developing East Asia, as elsewhere, has been limited. Several East Asian economies, both developing and advanced, have set up SME capital markets, and in some cases, their scope has become large. The experience of China; Hong Kong SAR, China; and Taiwan, China—which have the largest of these markets in East Asia—suggests that despite their focus on SMEs, these markets still tend to serve larger firms.
Inclusion at risk

The early focus of the region’s policy makers on agricultural development and labor-intensive manufacturing—along with their emphasis on avoiding macroeconomic crises (at least until the years that preceded the Asian Financial Crisis)—ensured that the resulting growth was inclusive. When countries across developing East Asia were mainly low income, their populations were predominantly rural and agricultural. Promoting agricultural development was a critical pathway to achieve growth and poverty reduction.

Export-oriented manufacturing, similarly, helped deliver economic growth and jobs for low-skilled labor. Coupled with rising productivity in agriculture, this export orientation helped propel countries’ structural transformation, creating regular and relatively well-paying employment for low-skilled workers who moved from work in rural areas into urban-based manufacturing. Low-skilled labor also benefited from backward and forward linkages in agriculture and labor-intensive manufacturing.18

With changing economic circumstances, including growing affluence across the region, the East Asian development model seems at risk of delivering less effectively on inclusion. Despite the region’s remarkable success in reducing income poverty, inequality rose through much of the early 2000s and has remained high in several countries. China, Indonesia, and Malaysia all have Gini coefficients over 0.4, considered high by international standards.19 And it is likely that standard measures do not capture the concentration of wealth at the top of the income distribution.

People’s concerns about inequality are also rising. Significant majorities of the region’s population—more than 90 percent in China and more than half in the Philippines—now think that income differences in their own countries are too large (World Bank 2016a). And in Vietnam, disparities in living standards were cited as a concern by a majority of those surveyed, with young people most concerned about income and nonincome inequalities (World Bank 2014). These perceptions are contributing to a sense that opportunities for upward mobility—long a hallmark of East Asia’s development experience—may now be becoming scarcer.

Technological change is accelerating

These worries about rising inequality are being reinforced by the impact of rapid technological change on labor markets. Although the precise pace at which several advanced technologies will spread is hard to predict, ICT is already deeply entrenched. These advances—so-called Industry 3.0—are seen most clearly in the spread of mobile phones and the internet across the region. Despite their diffusion, inequalities in access across and within countries remain a concern. Workers who lack access to digital technology and the ability to use it may find themselves falling further and further behind as technological change proceeds.

More broadly, technological change is raising the demand for more advanced skills in labor markets across developing East Asia, increasing the likelihood that workers with poor education or weak skill sets could be excluded. The advent of the so-called fourth industrial revolution, or Industry 4.0, which comprises physical, biological, and advanced digital technologies, is likely to further raise the premium on skills.20 Cheaper and more user-friendly robots, for example, offer the prospect of productivity increases while substituting for labor, particularly at the lower-skill end of the market. Advances in artificial intelligence and machine learning will change the way knowledge work is organized and reinforce incentives to automate. Similarly, additive manufacturing (such as 3-D printing) will allow for the customization of production closer to consumers, both reducing the importance of scale economies in production and disrupting value chains.
The increasing adoption of all these technologies in labor-scarce high-income economies and in China could lead to reshoring of their production, marking a move away from the offshoring and fragmentation that currently characterizes much of manufacturing. These trends could further reduce the demand for low-skilled labor in middle-income East Asia, which is especially worrying for countries such as Cambodia, Myanmar, and Vietnam.

Evidence on the pace of adoption and impact of Industry 4.0 technologies is still sparse. But the price of these technologies, including advanced robotics, is falling rapidly. Consequently, the stock of industrial robots has risen rapidly in advanced economies, including Japan and Korea. China also has seen a sharp rise in its number of industrial robots, although the density of these robots (relative to the number of manufacturing workers) is still below that of Korea and other advanced economies in the region (figure O.6). China’s pace of automation will be particularly important in determining industrial location, productivity, and labor market outcomes—both within China and across the region. While rising labor costs are increasing incentives for Chinese manufacturers to offshore some activities, thus lengthening regional value chains, continued declines in the price of industrial robots will make reshoring to China more profitable. It is not yet clear which of these competing forces will win out.

Policy makers in developing East Asia, therefore, face three sets of challenges to promoting inclusive growth in the face of technological change: skills; access to digital technologies; and adequate social protection for those unable to make the necessary economic transitions.

**FIGURE O.6** Use of industrial robots in manufacturing is increasingly important in several East Asian economies

Source: International Federation of Robotics and International Labour Organization databases, as estimated in Mason, A., V. Kehayova, and J. Yang, “Trade, Technology, Skills, and Jobs: Exploring the Road Ahead for Developing East Asia,” background paper for this study (World Bank, Washington, DC, 2018).
Skills development is lagging

Despite the progress developing East Asia has made in increasing access to education, with noteworthy upward mobility in education over the past 40 years (Narayan et al. 2018), many countries still face challenges. Specifically, whereas 40 percent of students in developing East Asia are realizing impressive learning outcomes (achieving at or above Organisation for Economic Co-operation and Development [OECD] levels), the other 60 percent still face significant challenges in building basic foundational skills. Even where students are demonstrating strong learning outcomes, countries face continuing challenges in endowing their populations with the advanced skills—higher-order cognitive skills, socioemotional skills, and digital literacy—needed to be competitive in the 21st-century economy.

Moreover, inequalities in educational opportunities persist across socioeconomic groups in most countries. Although progress has been made in closing gaps in access to education between the poor and the nonpoor—especially in basic education—stark differences in access remain at the secondary level and beyond. Inequalities in educational opportunities are also reflected in gaps in learning outcomes across socioeconomic groups. Students from poorer families consistently demonstrate lower proficiency levels in reading, math, and science than wealthier students (figure O.7). Even when students from poorer backgrounds complete more schooling, they still experience learning and skills deficits relative to their wealthier counterparts. These skills gaps will create challenges for those individuals to participate successfully in their countries’ labor markets as their countries develop.

Access to digital technologies remains uneven

Ensuring broad access to digital technology is still a challenge across much of developing East Asia. Despite the rapid expansion in the use of ICT across the region (with more cellphones than people in several countries), some countries still lag. This digital gap is particularly stark in internet access, as proxied by internet use. For example, internet use in the Lao People’s Democratic Republic, Mongolia, and Myanmar is still only 20–30 percent—far lower than in China, Malaysia, and the Philippines.

There is also a digital divide within countries. Recent estimates indicate that about 1.7 billion people lack access to broadband, about 1.2 billion are without internet, and 400 million do not have mobile phones. Even in China, nearly half the population still lacks access to the internet. Moreover, data from Indonesia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam show consistently low internet use among poor households—both in absolute terms and compared with middle class or even economically secure households (figure O.8).

Support for making economic transitions is limited

Older workers; poor and economically vulnerable populations; and those from more remote, less-developed regions (that is, those
with lower-quality education) may be particularly vulnerable to the changes that result from technological advances and shifting trade patterns. Putting in place or strengthening systems of support—training and skills upgrading for current workers and safety nets for newly unemployed or redundant workers—to help those who are poorly equipped to make the transition to more skills-based, technology-driven economies will present several challenges for developing East Asian countries:

• Low social spending. Overall public spending on social sectors in developing East Asia remains low as a share of GDP compared with that of high-income economies and all other low- and middle-income regions (figure O.9), as is spending on the sorts of social safety nets and employment support programs that support transitions to more skill-intensive occupations.

• Patchy safety net coverage. Coverage of safety nets in developing East Asia is also relatively low, at least compared to other middle-income regions.

• Limited program focus. The region’s social protection and labor programs focus mainly on structural conditions (such as poverty); on specific groups (such as youth, elderly, and the disabled); and on access to basic services (such as health care) as opposed to economic transitions. Only a small share of active labor market programs address unemployment, for example, while unemployment insurance programs only exist in a subset of countries and cover only a small share of the unemployed (Betcherman and Moroz 2018).

State effectiveness challenged

Across much of developing East Asia, good economic governance has supported economic stability and basic service delivery and thus has contributed to both growth and inclusion. However, the challenges of enhancing state effectiveness—defined as improving the capacity of government to set objectives and attain them—are now more significant for developing East Asia than they were at earlier stages of development.

The political economy challenges that governments face during the transition from middle-income to high-income status are more complex. Moreover, as countries seek to build increasingly affluent, middle-class societies, they will face increasing demands for the delivery of more and better-quality services, including from a larger and more vocal middle class. These challenges are accentuated by the limitations many countries in the region face in terms of limited voice and accountability, uneven bureaucratic quality, and low public revenues.

Growing political economy challenges

Three political economy challenges are particularly significant for developing East Asia. First, there is a risk of policy capture. Rapid growth and the associated policies that helped developing East Asian countries achieve...
middle-income status have generated winners and losers. The winners—whether business or political elites—often have a strong interest in maintaining the status quo. In developing East Asia, these winners have included both private business interests and state-owned enterprises. To the extent that these groups perceive reforms that could increase productivity or promote inclusion as going against their interests, they may use their power to impede the reforms’ implementation.

Second, it may be more difficult to build the broad-based coalitions required for deeper reforms. In middle-income countries, new political interest groups emerge that were less pronounced when the countries had lower incomes, and these groups may make the formation of reform coalitions more difficult. Increasingly divergent interests arise—for instance, between urban and rural residents, between business and labor (or within labor between formal and informal sector workers), and between a growing middle class and the poor and vulnerable.

Third, as countries get richer and their economies more complex, traditional “deals-based relationships” are no longer an adequate substitute for “rules-based contract enforcement” (World Bank 2017c). In low-income economies, where institutional capacity is low and markets and production networks are relatively small, deals-based relationships may actually enable economic activity. In middle-income settings, however, these relationships can risk impeding competition and productivity while undermining inclusion.

**Rising societal expectations**

Countries’ transition from middle-income to high-income status brings with it more people who are economically secure and middle class and, with them, rising societal expectations about the quantity and quality of public services. As countries develop, these growing economic classes often create coalitions to demand better governance and public services (World Bank 2017c). If governments lack the capacity to deliver such services, these groups—with their growing economic and political clout—may opt out of public service utilization. This already appears to be happening in some developing East Asian countries. This process of opting out can result, in turn, in a retreat of these groups from the policy

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**FIGURE O.9** Government spending on the social sectors is low in developing East Asia

Sources: World Bank World Development Indicators, Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE), East Asia and Pacific Social Protection database, and Pensions databases; Organisation of Economic Co-operation and Development (OECD) Social Expenditure database; Betcherman and Moroz 2018; World Bank staff calculations.

Note: Shares of social spending shown are simple averages across country groups. The number of countries in each group is displayed within parentheses. “Developing East Asia” includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. GDP = gross domestic product.
A RESURGENT EAST ASIA

These challenges of state effectiveness in middle-income countries can be overcome if influence and incentives are balanced through more transparent policy making processes, suitable accountability mechanisms, and robust public agency design. However, most countries in developing East Asia face challenges in these areas as well. Mechanisms for citizen voice and participation generally remain weak, as do government transparency and accountability. And the quality of policy making and implementation varies widely across levels and functions among the region’s governments.

Voice, transparency, and accountability

Countries in the region generally rank low on standard measures of voice and accountability compared with other middle-income countries, and these rankings have changed little over time (figure O.10). Measures that capture different dimensions of voice—including people’s ability to have their views represented in country legislatures or to access informal avenues for participation in regulatory decision making—show similar results, as do measures of transparency in government—although with differences across countries.

Data on institutional checks and balances suggest that constraints on executive decision making have increased moderately in developing East Asia over the past two decades (figure O.11). As a result, the region is now roughly on par with all lower-middle-income countries on average, although governments in the region still face fewer constraints on decision making than do governments in upper-middle-income countries globally. There is, thus, considerable scope for countries in developing East Asia to strengthen voice, make information on policy more available and actionable, and enhance checks and balances.

Promoting greater voice and transparency in policy processes and strengthening accountability can contribute to more effective, sustainable policy making. As noted in the World Development Report 2017: Governance and the Law, “A more
A contestable policy arena tends to be associated with higher levels of legitimacy and cooperation. When procedures for selecting and implementing policies are more contestable, those policies tend to be perceived as ‘fair’ and to induce cooperation more effectively” (World Bank 2017c).

Indeed, evidence from the region indicates that greater citizen participation has contributed to greater buy-in for policies as well as better outcomes. Villagers in Indonesia reported significantly higher satisfaction, increased knowledge, and higher willingness to contribute to projects when they were allowed to cast votes directly in plebiscites than when traditional decision-making processes, in meetings run by representatives, were implemented (Olken 2010). Evaluations of elections in rural Chinese villages similarly found that these served to increase public goods provision, reduce corruption, and reduce income inequality (Martinez-Bravo et al. 2011; Martinez-Bravo, Miquel, and Qian 2012).

**Bureaucratic quality**

Meritocratic hiring and promotion of staff are important inputs into the quality of policy making and implementation—what World Development Report 2017: Governance and the Law calls “robust public agency design” (World Bank 2017c). These inputs can play a particularly valuable role in mitigating policy capture and increasing government responsiveness if combined with appropriate accountability mechanisms and commitment to rules-based contracts (World Bank 2017c).

Data on meritocratic hiring and promotion in developing East Asia paint a mixed picture, however (figure O.12). On the one hand, most countries in the region do well with respect to having meritocratic and competitive selection processes (countries in the upper-right quadrant of figure O.12, panel a). On the other hand, political and personal connections still appear to play important roles in civil service recruitment (countries in the upper-right quadrant of figure O.12, panel b). Based on these measures, connections are particularly important in Cambodia, Lao PDR, Mongolia, and Vietnam, indicating that meritocracy in their civil services is still tempered by personalism.
The transition to high-income status
As average incomes and societal expectations grow, financing higher-income, increasingly middle-class agendas will be a key challenge. This includes raising resources to increase the availability and quality of basic services for the middle class and the aspiring middle class and to finance investments to promote inclusive growth, including through better learning outcomes and enhanced skills, improved access to digital technologies, and more effective social protection systems. Governments in developing East Asia will need not only to raise more revenue but also to spend that revenue more effectively.

Revenue mobilization is low in developing East Asia relative to both high-income and middle-income economies in other regions (figure O.13). The region’s low revenue mobilization is driven by low tax collection, reflecting complex tax codes (which, among other things, include numerous exemptions); weak tax administration; narrow tax bases; and the high costs of tax compliance. Many countries in developing East Asia also continue to rely extensively on indirect taxation, including value added taxes (VAT), excise taxes, trade taxes, and in a few cases, nontax, resource-related revenues (IMF 2017; World Bank 2017a), which tend to be more regressive than direct taxes. However, direct taxes—and personal income taxes in particular—tend to make up only a small share of revenues, particularly relative to high-income economies.

Navigating a changing world: directions for policy
Policy makers in developing East Asia will confront familiar as well as new challenges as they navigate their economies through the coming decade. In the face of these challenges, what has come to be known as the East Asian development model—a combination of outward-oriented growth, human capital development, and sound economic governance—still has much to recommend it, both to the countries at the lower end of the middle-income scale as well as to those that are closer to high-income status. But, irrespective of countries’ levels of income and development, this strategy that has worked so well to date must be adjusted if countries are to sustain high growth, ensure that development remains inclusive, and deliver on the rising expectations of their


Note: “Developing East Asia” here includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, and Thailand. GDP = gross domestic product.
increasingly middle-class societies. The pace at which global and regional forces are evolving, particularly those affecting trade and technology, only raises the urgency for action.

Although maintaining the outward orientation of their economies will remain central to the region’s prospects, changes in trade patterns and technology are shifting the basis for economic competitiveness and comparative advantage. Human capital investments will continue to be critical, but the nature of the skills needed for countries to succeed in the 21st century is changing, with rising demand for workers with higher-order cognitive, socioemotional, and technical skills. Designing and implementing sound economic policies, while still essential, will have to be complemented in ways that meet the needs and expectations of aspiring high-income and increasingly middle-class societies, whether through better service delivery or greater accountability. Wherever countries currently are in the middle-income spectrum, these challenges must be addressed if East Asia is to continue its success in raising its people’s living standards into another decade.

As always, action is needed on many fronts. And while priorities will necessarily have country-specific elements, several directions for policy are especially pertinent to the challenges identified in this report and apply broadly across the region. These directions fall under five pillars:

1. Boosting economic competitiveness
2. Building skills
3. Promoting inclusion
4. Strengthening state institutions
5. Financing the transition to high income.

Moreover, these reform priorities are of two types: (a) emerging policy priorities: reform areas that will require special emphasis as countries strive to move from middle-income to high-income status and (b) foundational policies: reform areas that countries have been pursuing for some time and that remain critical to providing a sound basis for growth and development. The key elements of this policy agenda are summarized in table O.2.

**Pillar 1: Boosting economic competitiveness**

Reversing the slowdown in productivity in many of East Asia’s developing economies requires that they redouble their efforts to become more competitive, an imperative heightened by ongoing changes in global trade and technology. The emerging policy priorities to boost economic competitiveness include:

- Reforming services sectors
- Deepening trade agreements
- Broadening innovation policies
- Improving SME access to finance.

Maintaining open trade policies remains a priority for the region, with two areas now emerging as particularly important. The first is services reform, on which the region has lagged relative to goods trade as well as compared to what other developing regions have achieved. Yet trade in services offers significant new opportunities, including in relation to technological developments. While the specifics of the reform agenda will depend on country circumstances, reducing entry barriers and fostering competition should be their main aim. Regional approaches, including through the ASEAN Economic Community, offer promise in finding the right regulatory balance between promoting service exports and promoting domestic access to services.

Second, it will be important to expand the scope of regional trade agreements to achieve such goals as better protection of foreign investment and intellectual property rights, a more competitive environment through competition policy and the regulation of state-owned enterprises, and easier movement of people and capital across borders. These and other “deep” provisions embedded in trade agreements can contribute to the further development of global value chains. They are even more relevant as developing East Asia not only seeks to specialize in low value-added tasks like product assembly but also participates increasingly in the production of more sophisticated goods and services. The “open regionalism” embodied
TABLE O.2 Policy directions for a resurgent East Asia

<table>
<thead>
<tr>
<th>Policy priority type</th>
<th>Boosting economic competitiveness</th>
<th>Building skills</th>
<th>Promoting inclusion</th>
<th>Strengthening institutions</th>
<th>Financing the transition to high income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emerging policy priorities</td>
<td>• Reform services sector policies • Deepen trade agreements • Increase competition and lower entry barriers for provision of broadband • Attract private capital to expand broadband provision • Upgrade managerial capabilities • Expand the scope of credit registries, including with online platforms • Reform secured transactions systems</td>
<td>• Develop higher-order cognitive and socioemotional skills, including through technology-enabled learning • Build continuous skills development systems, including TVET and lifelong learning programs, with close links to private sector employers • Enhance technical capacities and digital literacy</td>
<td>• Expand employment services, including job search assistance and labor market information • Broaden unemployment benefits • Integrate social protection systems linked to employment transitions • Expand access to digital technologies and make them more affordable</td>
<td>• Expand mechanisms for citizen voice and participation • Increase government transparency • Strengthen accountability in policy making processes, including through internal checks and balances and regional and international agreements</td>
<td>• Expand the tax base by introducing or expanding • Direct taxes, including personal income taxes, property taxes, and/or wealth taxes • Taxes that reduce negative externalities • Reduce tax competition, including through regional cooperation</td>
</tr>
<tr>
<td>Foundational policies</td>
<td>• Improve business climate and reform regulatory environment • Strengthen financial sector infrastructure</td>
<td>• Strengthen learning outcomes in primary and secondary schools, including for lagging groups and regions • Work progressively to universalize primary and secondary education, where relevant • Broaden access to university education</td>
<td>• Reform generalized subsidies, such as those on food and fuel • Expand social assistance programs targeted to the poor and vulnerable • Reorient public spending to better promote inclusive growth</td>
<td>• Strengthen bureaucratic quality through meritocratic hiring and promotions and enhanced performance management, including via digital platforms</td>
<td>• Simplify tax codes, including for corporate taxes and VAT • Strengthen tax administration</td>
</tr>
</tbody>
</table>

Note: TVET = technical and vocational education and training; VAT = value added tax.

in the Asia-Pacific Economic Cooperation (APEC) illustrates a sound approach. Deeper regional integration also offers a potential way of counteracting the current global economic forces that are pushing toward greater protectionism.

Another emerging priority is for countries to broaden their view of innovation policies, looking beyond the supply side (that is, science, technology, and research and development policies) to build effective national innovation systems. An important part of this shift in perspective, given the rapidly changing technological environment, will involve promoting faster diffusion of digital (Industry 3.0) technologies. Ensuring wider diffusion of broadband technology across the population, and to businesses in particular, will require sectoral measures that help to provide higher-quality and competitively priced broadband access, including appropriate regulatory reforms. Upgrading managerial practices also deserves special attention in supporting innovation in the region, both because of the importance of management quality in determining the efficacy of innovation investment and because of its pervasive weakness in the region.

Priority must also be given to developing innovative measures to address the informational constraints that limit SMEs’ access to finance. Digital technologies and platforms
can help in enhancing these approaches. Two schemes hold particular promise: (a) expanding information-sharing mechanisms such as credit registries and bureaus, and (b) modernizing secured transactions systems so that assets such as accounts receivable can be used as collateral by SMEs.

While focusing on these emerging priorities, it will be important that countries not lose sight of the foundational policies that underpin their economic competitiveness. Indeed, ongoing efforts to improve countries’ overall business climates, reform their regulatory environments, and strengthen their financial sector infrastructure will all continue to be critical to strengthening their positions in relation to deepening trade integration, spurring innovation, and improving SMEs’ access to finance.

**Pillar 2: Building skills**

Successfully navigating the changing economic environment will require that countries’ populations be increasingly prepared to meet the rising demand for more-advanced skills. The nature of work is already shifting and will likely do so at an increasingly rapid pace as technology changes. Emerging policy priorities in this area thus include:

- Developing higher-order cognitive and socioemotional skills among current and future workers
- Building continuous skills development systems to enable lifelong learning and skills upgrading
- Enhancing people’s digital and technical capabilities.

Building higher-order cognitive and socioemotional skills will be increasingly important to ensure that workers are productive and competitive in rapidly changing economies. Development of these skills needs to start early, implying that efforts to broaden access to early childhood development will remain important. The foundations for more-advanced skills can then be further developed and nurtured over the learning life cycle. In recognition of evolving skills needs, a growing number of countries, including Korea and Singapore, are placing greater emphasis on developing problem solving, creative thinking, socioemotional, and other higher-order skills. Given the likely speed of change, it will also be important for countries in the region to explore innovative approaches to skills development, including through technology-enabled learning platforms.

As technology and employers’ demands for skills continue to change, it will be important for countries to build skills development systems to enable learning and skills upgrading over people’s entire working lives. Technical and vocational education and training (TVET) programs can play a part of countries’ broader skills development strategies, as can other programs that support lifelong learning. To be effective, such programs must have greater market relevance and closer links to private sector employers than has generally been the case in the past. Building public-private partnerships that foster enterprise leadership in curricular design and program delivery will thus be critical. Governments have a key oversight role, however, that includes monitoring program quality, encouraging firm accountability, and ensuring a results orientation in public financing.

As technologies change and workplace demands become more sophisticated, ensuring that workers can develop the necessary digital and technical capabilities will also be important. While there will be a growing need for people with technical expertise in the design, operation, and maintenance of digital technologies, a priority will be to promote digital literacy, especially among groups whose economic prospects are currently limited by lack of access to the digital economy.

For most countries in the region, building advanced skills among their populations will require a continued focus on foundational measures to develop basic skills, because learning outcomes among students are often inadequate, particularly among those from poor and vulnerable families and in remote areas. Lessons from high-performing education systems in East Asia and elsewhere suggest that improving
learning outcomes will require an emphasis on the following (World Bank 2018a):

- Aligning institutions to ensure that the basic conditions for learning, such as curricula and teaching materials, are in place
- Strengthening teacher selection and preparation
- Ensuring adequate and effective public spending on basic education, including in remote settings and among disadvantaged groups
- Emphasizing support to early childhood education, health, and nutrition
- Instituting regular assessments to diagnose and address challenges.

Continued efforts to achieve universal primary and secondary education and to broaden access to—and improve the quality of—university education will also be important to building the skills needed for the 21st-century economy.

**Pillar 3: Promoting inclusion**

Social policies will also need to take account of how technological change is altering the demand for skills. In particular, governments in the region will need to put in place stronger and more nimble systems to support workers who have difficulty adjusting to rapidly changing economic circumstances. Three emerging priority areas are especially important to promoting inclusion in this context:

- Strengthening employment support services to assist workers displaced by technological change
- Broadening unemployment benefit schemes by linking them to economic transitions
- Enabling affordable access to digital technologies for those currently excluded.

Employment services are among the active labor market programs (ALMPs) that link beneficiaries with income-generating opportunities. Expanding their scope can complement the traditional personal and family network-based process of job search and matching, which can disadvantage poor and vulnerable workers. Their relevance is likely to be greater in economies with higher shares of wage earners and greater administrative capacity; such economies can consider providing “extended” services by linking employment support to training and skills development programs and to unemployment assistance or insurance. Nonetheless, even countries with lower capacity can focus on providing “core” employment services, including information on overall job market conditions and vacancies, basic job search assistance, and job placement services.

Unemployment insurance is relatively new in developing East Asia, with severance programs being the usual approach to dealing with unemployment. Nevertheless, countries should consider developing or expanding unemployment insurance systems, including by progressively broadening coverage to include self-employed workers, as has been done in Korea. Unemployment insurance programs could be linked not only to ALMPs to support workers’ reemployment but also to expanded and strengthened systems of social assistance to help prevent those who cannot make the skills transition from falling into poverty. Development of such integrated and “adaptive” social protection systems can be enabled using digital technologies—in some cases, by building on existing social registry platforms.

Increasing access to affordable digital technologies to those who currently lack it will also be important to fostering inclusion—helping them obtain real-time weather and price information, access markets, purchase consumer goods, engage in mobile banking, and, when needed, receive social benefits. Two sets of actions would enhance affordable access to digital technology. First, promoting market competition, private investment, and independent regulation has generally been effective in extending coverage and making digital technology access affordable. Second, where markets do not work well enough in extending digital infrastructure (as in rural and remote locations), mechanisms such as targeted subsidies to operators or licensing...
of mobile and internet service providers with specific network rollout obligations are worth considering (World Bank 2016b).

In addition, continued attention to foundational policy reforms is required to make public spending a more effective force for inclusion. First, there is a need to reform inefficient and poorly targeted generalized subsidy programs, such as those for fuel and food, that keep consumer prices artificially low. While typically justified on the grounds that they support redistributional objectives, these subsidies commonly benefit better-off households rather than the poor and vulnerable.

Second, there is a need to expand and strengthen countries’ systems of social assistance to better protect the remaining poor and vulnerable. Although widespread income poverty is no longer the primary concern in developing East Asia, there is still a strong case for countries to have adequate and effective safety net programs.

Third, it will be important to reorient spending toward expanding public services, such as basic education and primary health care, that help promote equality of opportunity among the poor and vulnerable. Such spending has contributed to inclusion in Indonesia and Vietnam, and there is scope for it to make a difference elsewhere in the region, provided greater spending can contribute as well to higher-quality services. Part of this additional spending could be financed from reduced spending on generalized subsidies so as not to exacerbate fiscal pressures.

Pillar 4: Strengthening state institutions

To address the political economy challenges faced by middle-income countries and meet the demands of their increasingly middle-class societies, it will be important to increase the effectiveness of state institutions, particularly by enhancing government accountability. Three emerging priorities in this regard are as follows:

• Expanding mechanisms to promote citizens’ voice and participation
• Strengthening the systems of checks and balances.

With respect to voice, it will be important for governments to find ways to allow citizens to convey their views and contribute to policy-making processes through a range of institutional mechanisms. Several countries in the region have already put in place, or are implementing, measures aimed at increasing citizen voice, including public consultation, administrative measures, and voluntary compliance. The idea behind introducing such mechanisms is to enable citizens’ feedback to be integrated into policy-making processes. They also enable policy makers to gain valuable insights into people’s views and preferences. Moreover, evidence suggests that such measures have helped to reduce corruption and increase sustainability of reforms by improving stakeholders’ perceptions of enacted measures.26

For mechanisms that enhance voice and participation to be effective, it is also necessary that accurate, accessible, and actionable information be provided, including through public access to government documents on existing or proposed laws and regulations and on government budgets. Indeed, people’s ability to participate constructively and effectively in policy-making processes depends on the timely availability of accurate information. As with mechanisms to enhance voice, several governments in the region have initiated measures to increase government transparency, including through passage of Freedom of Information legislation. And, as with voice, there remains considerable scope for increasing government transparency.

Strengthening checks and balances will be important to ensure that greater voice and transparency will lead to greater accountability on the part of the state. Multiple mechanisms can achieve greater accountability, and the precise choice of measures will depend on country circumstances. While electoral systems as well as judicial and legislative checks on the executive are the most direct mechanisms for promoting accountability, there are also other means. Broad business coalitions can play a significant role.
in demanding government accountability (World Bank 2017c). International agreements and institutions can also contribute to greater accountability. Indeed, regional or multilateral agreements—for example, those made through ASEAN or through deep trade agreements such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)—can serve as valuable (if imperfect) commitment mechanisms for governments.

Measures to increase voice, transparency, and accountability will need to be complemented by continued efforts to upgrade bureaucratic quality. These efforts include measures to increase merit-based selection and promotion of civil servants (instead of selection through political or personal connections and influence) and to improve public sector performance management. Several recent initiatives highlight how digital platforms can be used to enhance recruitment processes for civil servants, providing effective tools for implementing and monitoring the business of the state, thereby improving public sector performance.

**Pillar 5: Financing the transition to high income**

To succeed in transitioning to high-income status, countries in the region must mobilize additional fiscal resources to sustainably finance the needs of their increasingly middle-class societies. Emerging policy priorities for increasing revenues include measures to expand the tax base and to limit tax competition.

By expanding the tax base, there is potential both to better use existing taxes and to introduce new, less distortionary taxes. For example, many countries in the region could more extensively use direct taxes such as personal income taxes, property taxes, and wealth taxes—instruments that are used widely in high-income countries. Taxes that address negative externalities (such as those on tobacco, unhealthy foods, and pollutants) could also be used more, as they have the dual benefits of raising revenues while curbing activities that reduce people’s welfare.

Limiting tax competition—whereby countries offer increasingly generous tax incentives to attract or retain foreign investment—is likely to be most effectively achieved through coordinated action across countries, given the region’s economic integration. The ASEAN Economic Community, along with regional trade agreements, offer promising avenues for increased cooperation in this regard.

Measures to increase the tax base and reduce tax competition will need to be accompanied by continued attention to foundational measures to simplify countries’ tax systems and improve their tax administrations. Reducing exemptions (especially for VAT, where it is used), simplifying corporate income taxes, and increasing the ease of tax payment all represent promising approaches to tax system simplification. Such measures would contribute to reducing the costs of tax compliance and would likely raise revenue intake even if some tax rates were reduced. The efficiency and effectiveness of tax administration could also be enhanced by strengthening administrative systems and improving the enforcement of compliance. Again, digital technology platforms, coupled with countries’ efforts to raise bureaucratic quality, could help in these efforts.

Governments across the region will need to balance the inevitable trade-offs between promoting growth, fostering inclusion, and raising adequate revenues. Managing these trade-offs will reinforce the need for a new social contract, in which governments provide more and better public services in return for greater participation in and compliance with the tax system. Such a social contract would establish greater accountability on the part of governments for the quality of their spending decisions, thereby giving their citizens more of a stake in paying taxes and, more broadly, a greater sense of ownership in the ongoing transition of these countries from middle income to high income.

Developing East Asia’s economic success has been built on a combination of policies that fostered outward-oriented labor-intensive growth, strengthened people’s basic human
capital, and maintained sound economic governance. The East Asian “growth with equity” model has delivered rapid and sustained growth, raising countries in the region to middle-income status while lifting hundreds of millions out of poverty and into economic security. Changes in global and local economic forces, including shifts in trade and rapid technological change, are causing the region’s policy makers to reflect on how best to build on this progress. To successfully navigate these changes, they will have to confront both familiar and novel challenges—to boost countries’ competitiveness, build people’s skills, foster inclusion, and strengthen the institutions of the state. Although the precise nature and pace of change are uncertain, their direction is not, serving only to increase the urgency of reform. Policy makers across the region must act decisively or risk missing opportunities to sustain East Asia’s remarkable development performance.

Notes

1. In what follows, and unless otherwise specified in this report, East Asia and developing East Asia refer to these 10 middle-income countries: Cambodia, China, Indonesia, the Lao People’s Democratic Republic, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam.

2. Historical statistics are from the Maddison Project Database, version 2018 (Bolt et al. 2018). For more information, see the Maddison Project: https://www.rug.nl/ggdc/historicaldevelopment/maddison/.

3. All references to income classifications of low, lower-middle, upper-middle, and high-income economies use the World Bank Atlas method, adjusted over time. In 2016, these gross national income (GNI) per capita cutoffs were US$1,005 (low income); US$1,006–US$3,955 (lower-middle income); US$3,956–US$12,235 (upper-middle income); and US$12,236 (high income).

4. The main elements of this development model and its achievements were spelled out in Birdsall et al. (1993) for the so-called high-performing Asian economies. These economies consisted of the so-called newly industrializing economies (Hong Kong SAR, China; Korea; Singapore; and Taiwan, China) as well as Indonesia, Malaysia, and Thailand.

5. The “extreme poor” are those whose per capita consumption is below the international poverty line (US$1.90 per day at 2011 PPP), while the “moderate poor” are those whose per capita consumption is between US$1.90 per day and US$3.20 per day at 2011 PPP (also referred to as the “lower-middle-income class poverty line”).

6. “Government effectiveness” is defined according to the Worldwide Governance Indicators (WGI) database 2017 (http://www.govindicators.org). Measuring governance is difficult, and no single measure or indicator is perfect. For some purposes, it is useful to combine different data sources into an aggregate measure such as the WGI, while for other purposes the disaggregated underlying data are more useful. The World Bank has a range of tools to assess the quality of governance, including the Doing Business indicators (http://www.doingbusiness.org/), which benchmark the regulatory environment, cross-country enterprise surveys to assess the investment climate, and the Public Expenditure and Financial Accountability (PEFA) indicators to measure the performance of fiscal institutions. A number of nongovernmental organizations (NGOs) also measures various dimensions of governance in other ways. This report uses the WGI to inform discussion and analysis of governance-related issues and complements them with other indicators to provide a more comprehensive view. For a collection of the most important governance indicators, see https://govdata360.worldbank.org/.


9. Constantinescu, Mattoo, and Ruta, “Trade in Developing East Asia.”

10. Constantinescu, Mattoo, and Ruta, “Trade in Developing East Asia.”

11. “Smart factories” work by using technologies—such as artificial intelligence
12. The GII annually ranks 127 countries by their capacity for, and their success in, innovation. Published by Cornell University, the European Institute of Business Administration (INSEAD), and the World Intellectual Property Organization in partnership with others, it uses both subjective and objective data from sources such as the World Bank, the World Economic Forum, and the International Telecommunication Union. The GII is computed by taking a simple average of the scores in two sub-indexes (the Innovation Input Index and Innovation Output Index) comprising a total of 80 indicators. For more information, see the GII website: https://www.globalinnovationindex.org/gii-2017-report.

13. The GII does not include three of the East Asian countries covered in this volume: Lao PDR, Mongolia, and Myanmar.

14. M. Iootty, “Assessing Innovation Patterns and Constraints in East Asia Region: An Introductory Analysis,” background paper for this study (World Bank, Washington, DC, 2018). As with all composite indexes, country ratings from the GII need to be interpreted with caution and combined with other information. For instance, the apparent inconsistency between the low ranking of these East Asian countries on the regulatory and business environment part of the GII's institutions pillar and their relatively high ranking on government effectiveness in the WGI (see figure O.3 and accompanying discussion) arises from the differing components in each index. Moreover, as the example of institutions also highlights, a country's ranking above the value of the median country and the predicted value based on its per capita GDP on a specific pillar does not necessarily mean it does well on each subcomponent of that pillar.

15. Abraham, Cortina, and Schmukler, “Corporate Financing in East Asia.”


17. Abraham, Cortina, and Schmukler, “Corporate Financing in East Asia.”

18. Findings on the benefits to low-skilled labor from World Bank (2013) and Mason, A., V. Kehayova, and J. Yang, “Trade, Technology, Skills, and Jobs: Exploring the Road Ahead for Developing East Asia,” background paper for this study (World Bank, Washington, DC 2018).

19. The Gini coefficient is the most commonly used measure of the inequality of the distribution of income (or consumption) in an economy. A Gini value of 0.0 indicates perfect equality, and a value of 1.0 indicates perfect inequality.

20. Changes in physical technologies emerging from advances in molecular-level engineering and high-tech manufacturing include advanced materials, advanced manufacturing (including advanced robotics), and additive manufacturing (or 3-D printing). New biological technologies are allowing for the manipulation of genes and DNA sequences to influence medical outcomes and correct genetic defects. Advanced digital technological change includes transformations in such fields as finance (fintech), the internet of things, and artificial intelligence. For details, see Bhaskaran, M., “Selected Global and Regional Megatrends and Implications for Developing East Asia,” background paper for this study (World Bank, Washington, DC, 2017).


References


Introduction

East Asia’s success in the past half century is now part of economic lore. A succession of economies across the region have progressed from low-income to middle-income status during this time—with some, such as the Republic of Korea, having escaped the so-called “middle-income trap” and made the transition from low- to high-income status in a single generation.

The first to make this move were the so-called newly industrializing economies (NIEs): Hong Kong SAR, China; Korea; Singapore; and Taiwan, China. Their growth accelerated in the 1960s and 1970s, and they are all now high-income economies. A second wave of countries (China, Indonesia, Malaysia, and Thailand) followed in the 1980s with sustained growth through the latter part of the 1990s. And in the new millennium, a third wave has followed, led by Vietnam and including Cambodia, the Lao People’s Democratic Republic, Mongolia, Myanmar, and the Philippines.

This success has been termed the “East Asian Miracle,” not because there was anything inexplicable about what transpired but rather because of the sheer scale and pace of the transformation. Just 40 years ago, the region included countries that faced some of the most difficult development challenges in scale and scope. China had a nominal per capita gross domestic product (GDP) of just about $150 and was cut off from the world. Indonesia was only a little bit richer, with a per capita GDP of about $400 and recovering from its failed experiment with socialism. Cambodia, Lao PDR, and Vietnam were all devastated by years of conflict, and Myanmar had retreated into isolation.

Today, An East Asian Renaissance—the title of a World Bank study of the region a decade ago (Gill and Kharas 2007)—is well under way. The region is bustling with economic activity, reflecting a lively mix of advanced and middle-income economies that account collectively for almost a third of the world’s GDP. The significance and role of the region’s middle-income economies, which are the subject of this study, has become even more prominent in the past couple of decades. Part of this shift mirrors the rise of China, which is now the world’s largest (in purchasing power parity [PPP] terms) or second-largest economy (at market prices). But it also reflects the
emergence of the five large Association of Southeast Asian Nations (ASEAN) middle-income economies: Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. These countries can now realistically aspire to becoming high-income within the next generation or two, with the rest not far behind.¹

Yet East Asia’s resurgence remains incomplete. Despite China’s spectacular growth over the past 40 years, for example, its per capita income is still only about a fifth of the average in high-income economies. Among the region’s economies at the lower end of the middle-income scale, this disparity is obviously even larger: per capita incomes in Cambodia and Vietnam are only about 3 percent and 5 percent, respectively, of the high-income average. Developing East Asia also lags in labor productivity and human capital relative not only to the United States but also to Chile and Korea when those countries achieved high-income status (in 2011 and 2001, respectively). When Chile and Korea became high-income economies, for instance, their labor productivity levels were, respectively, almost 2 and 2.5 times that of China in 2015, while their human capital levels were a quarter and a third higher, respectively. Finally, as in other parts of the world, the region’s productivity growth has been slowing.

This study is about how the countries of developing East Asia can realize their aspirations to move up the income ladder while navigating the currents of a changing world and a changing region. Three sets of global and regional changes are likely to matter most to whether or not they succeed:

- **Advancing technologies.** The world is in the midst of rapid technological change that is changing the pattern and pace of demand for labor as well as the nature of comparative advantage.
- **Shifting trade flows.** These ongoing shifts, both globally and within East Asia, relate in part to the emergence of the Chinese economy as a regional and global powerhouse. They also relate to the recent slowing in the growth of global trade, particularly in goods.
- **Changing country circumstances.** As the countries have become more prosperous, they are now composed of more people who are middle class or aspiring to that status, with far fewer who are extremely poor even relative to the beginning of the century.

This work is the latest in a series of World Bank studies over the past quarter century on East Asia’s development policies (box 1.1).

This chapter is organized as follows: The next section, *East Asia’s Development Strategy*, describes the main elements of East Asia’s development model as well as how the overall strategy has been adapted over time to fit changing economic circumstances. *Key Development Trends* then looks back at East Asia’s recent development experience. Despite the region’s strong economic performance overall, the past two decades have been tumultuous globally as well as regionally. Much of the region was rocked by the Asian Financial Crisis in the late-1990s, which adversely affected incomes, employment, and living standards in Indonesia, Malaysia, and Thailand. About a decade later, the region was affected by the Global Financial Crisis, primarily through the contraction of global trade flows. The adverse impacts of this crisis were far less severe than those of the Asian Financial Crisis, however, with most low- and middle-income economies in the region continuing to grow robustly alongside continuing weaknesses in the global economy. The third section, *What Is Changing and Why It Matters for Developing East Asia*, looks ahead at the region’s prospects in light of the changes shaping the evolution of the global and regional economy. It examines the implications for East Asia of the three sets of global and regional changes: advancing technologies, shifting trade flows, and changing country circumstances.
Over the past quarter century, the World Bank has completed several major studies of East Asian development prospects and policies. The first—and perhaps the most influential—was *The East Asian Miracle*, which examined the rise of eight high-performing Asian economies (Birdsall and others 1993). The study covered Japan but not China, whose ascent was just beginning in the early 1990s. It highlighted the importance each of these economies placed on getting its policy fundamentals right, integrating into the global economy, and ensuring capable governance—features that have since been characterized as the East Asian “growth with equity” model. The study showed how these factors in turn resulted in rapid export-led growth, dramatic poverty reduction, and substantial physical and human capital accumulation.

*Lessons from East Asia* followed, presenting case studies of eight East Asian economies—the same set as those covered by *Miracle* but including the Philippines and excluding Japan (except to highlight how Japan was an exemplar to the later-developing countries) (Leipziger 1997). Its emphasis was on the role that regional learning played in the region’s economic success. Beginning with the experience of Japan, it showed how policy lessons traveled across borders in the region, first in the newly industrializing economies (NIEs) (Hong Kong SAR, China; Korea; Singapore; and Taiwan, China) and later to the second generation of high-growth economies in the 1980s. It highlighted the role of the institutional frameworks for policy formulation, the consistency of policies, and the quality of implementation.

The Asian Financial Crisis of 1997–98 led to a reconsideration of several aspects of East Asia’s development model, and *Rethinking the East Asian Miracle* was a collection of essays on these (Stiglitz and Yusuf 2001). Among other issues, it looked at the design of export promotion and import substitution policies, the use of industrial policies, openness to capital flows, mechanisms for technology transfer, and alternative exchange rate regimes. The study highlighted several policy areas, including capital flows management and industrial policies, about which the consensus of the *East Asian Miracle* was at least questionable in light of the Asian Financial Crisis and its aftermath.

*An East Asian Renaissance* reexamined East Asia’s growth, taking the Asian Financial Crisis as well as the rise of China into account (Gill and Kharas 2007). In doing so, it also drew on three emerging strands of economic thinking: the “new growth” theory, the economics of geography, and the “new trade” theory. It noted that since the end of the Asian Financial Crisis, more East Asian countries were looking to move from middle- to high-income status. This was accompanied by a greater focus on specialization in production and employment to reap the scale economies that characterize production. At the same time, the region had integrated regionally as well as globally, and this trade between East Asian countries increasingly reflected scale economies in addition to differences in factor endowments. Links between specialization, innovation, and trade were recognized as particularly important. Finally, the study noted that domestic integration was still needed to complement global and regional integration.

**East Asia’s development strategy**

Countries across East Asia have followed development policies that shared several common features. Collectively, these policies make up what is now characterized as East Asia’s “growth with equity” model. Broadly speaking, the strategy consisted of three pillars: outward-oriented, labor-intensive growth; investment in basic human capital; and sound economic governance.

**Outward-oriented, labor-intensive growth**

Recognizing that labor was their most abundant asset in their early stages of development, these economies promoted labor-intensive growth in ways that helped integrate them with the global economy. Two sets of policies were particularly important in this regard: support for agricultural sector growth and promotion of trade openness.
First, all these economies adopted policies to promote agricultural growth early in their development process. When they were relatively poor, their economic structures were heavily agricultural. Ensuring that their agricultural sectors were productive helped sustain growth and rapid poverty reduction. Because large swaths of their populations were dependent on agriculture, the sector’s expansion promoted schooling, rural-urban migration, and growth in agroprocessing and manufacturing that relied on agricultural inputs. Particularly effective measures included (a) low levels of agricultural taxation (in contrast, for instance, to much of Latin America at the time); (b) support to agricultural extension that allowed the rapid spread of Green Revolution rice technologies; and (c) expansion of rural infrastructure. These policies also proved particularly pro-poor when complemented by land reform and redistribution policies, as was the case first in Japan, Korea, and Taiwan, China, in the 1960s; in China between 1978 and 1983; and in Vietnam in 1993.

Second, policies to promote trade openness were central to countries’ strategies. Most of developing East Asia gave up import substitution early in favor of export promotion, in contrast to much of the low- and middle-income world at the time. These countries’ proximity to Japan, to the NIEs, and (for the rest of East Asia) to China made this outward-oriented strategy even more effective, especially after China started growing rapidly in the 1980s. The policy mix included a competitive (and sometimes undervalued) exchange rate, duty-free imports for exporting firms, export credits and export marketing institutions, and incentives for foreign direct investment (FDI). East Asian exports—especially of labor-intensive manufactures—expanded quickly, and countries diversified into new, more sophisticated products as they were able to absorb newer technologies, including through FDI flows. Even where selective measures (favoring a particular industry or subsector) were used to promote exports, their application was based on clear-cut, easily monitored performance criteria (linked to export performance); their use was time bound; and they were reversed when their efficacy diminished.

**Investment in basic human capital**

All the successful East Asian economies emphasized the expansion of basic services to build the human capital of their people. Basic education, health and nutrition, and family planning services were all promoted both as a means of raising labor productivity and as a way of enabling the poor to benefit from the expansion of labor-intensive growth.

These investments in basic human capital included several elements, all with a focus on the poor. There was an emphasis on primary and secondary education, particularly in public spending. Regarding health, countries focused on addressing diseases that particularly affected the poor, including by providing primary health care and targeting rural areas. Many countries also made improving access to family planning programs a priority, including by partnering with the private sector, as in Thailand.

**Sound economic governance**

East Asian policy makers also recognized the importance of consistent policy implementation policies for sustained development. This in turn called for credible and capable economic governance. Three aspects were particularly important across much of East Asia. First, there was a sustained commitment to maintaining macroeconomic stability, characterized by stable, typically low inflation and long-term fiscal discipline (CGD 2008). This emphasis stemmed from policy makers’ recognition that macroeconomic instability is the worst enemy of private investment and growth, not least because it scrambles market signals for the private sector, including foreign investors.

Second, East Asia’s economies relied primarily on markets in allocating resources. In most cases, this meant that governments were either not involved in production of private goods and the allocation of factors
of production (such as credit) or, if they were involved, ensured that market signals continued to be transmitted. In product markets, policies that emphasized openness to trade ensured that domestic firms were exposed to competition from imports or in foreign markets. Although this emphasis did not mean eschewing all interventions, including those that might favor particular industries (so-called “industrial policy”), such measures were monitored closely and modified, or they were eliminated when they became too costly or ineffective.

Third, the monitoring and adjustment of policies was possible, in part, because most of these governments were able to build effective and competent civil services, especially on economic matters, that were shielded from political interference. It was facilitated also by mechanisms that institutionalized frequent consultation between the government and business.

Adapting the strategy

Over time, countries across the region have modified this basic strategy in two ways to fit their changing circumstances. First, in the late-1990s, as the East Asian economies affected by the Asian Financial Crisis began to recover, there was a growing realization across the region that maintaining macroeconomic stability was far more complex in a world in which private capital flows had become more significant. In particular, much more attention needed to be paid to ensuring the consistency of exchange rate, capital account, and monetary policies—the so-called policy trilemma. More emphasis was also needed on instituting and implementing prudential regulations of the financial sector, particularly when capital inflows were high.

The second adjustment came during the 2000s. Following China’s accession to the World Trade Organization (WTO) and its subsequent emergence as a major player in global trade, other developing East Asian economies increased their emphasis on regional integration as a complement to global integration. Deeper integration across the region was seen both as a way to insulate against the transmission of global shocks and as a means for other developing East Asian economies to benefit from China’s economic ascension.

As will be seen below and in subsequent chapters, integration into China-centered value chains was an important means through which East Asia has integrated within itself. Changes in trade patterns illustrate this point. China’s exports of goods to the rest of developing East Asia almost doubled between 2005 and 2015, from about 5 percent of total exports to almost 10 percent. Over the same period, the share of exports from every other developing East Asian country to China also increased—in some, such as Lao PDR and Mongolia, by large multiples (from 4 percent to 32 percent of total exports in Lao PDR and from 48 percent to 84 percent in Mongolia) (Constantinescu, Mattoo, and Ruta 2018b).

Key development trends

The success of East Asia’s development strategy can be seen across many outcomes, spanning growth, inclusion, and governance. As is evident from these outcomes, the region has done well on a number of fronts: income growth, structural change, integration, digital connectivity, inclusion, and government effectiveness. This section focuses on the things that have gone well. The next section turns to the changes happening in the world and in the countries themselves that will be critical to framing many of these countries’ future challenges.

Income growth

Countries in the region have generally grown steadily and consistently over the past quarter century. China obviously stands out in the pace and consistency of its growth performance over this period, with its growth barely affected by either the Asian Financial Crisis or the Global Financial Crisis. Even leaving aside China, the other East Asian economies
have also performed well despite the setback of the Asian Financial Crisis (figure 1.1).

As a result, all the countries in developing East Asia have now reached middle-income status. This is a far cry from two decades ago when the region was predominantly in the low-income or lower-middle-income ranks. Nevertheless, there are still big differences in per capita incomes across countries. China, Malaysia, and Thailand are all upper-middle-income countries, with the first two likely to become high-income countries in the not too distant future. At the lower end of the middle-income spectrum are Cambodia, Lao PDR, and Myanmar, which have only recently moved up into this country grouping.

The resilience of growth across the region is also striking. Despite the severity of the Asian Financial Crisis, its effects on growth were relatively short lived, even in countries such as Indonesia, Malaysia, and Thailand (which were the worst affected in addition to Korea). By 1999 (the year following the crisis), growth was positive again across the region and continued to rise throughout the first part of the following decade (AMRO 2017).

The region then managed to weather the 2008–09 Global Financial Crisis much better than other low- and middle-income regions. Since 2010, the economies of developing East Asia have grown on average by almost 6.5 percent annually—not much slower than between 2000 and 2007 and much faster than other low- and middle-income regions. Developing East Asia’s GDP is now more than 3.5 times what it was in 2000 (figure 1.2). In contrast, GDP expanded much more slowly (less than 50 percent higher than

**FIGURE 1.1** Real GDP growth in developing East Asia, 1991–2016

![Graph showing real GDP growth in developing East Asia, 1991–2016](image)

Note: “Developing East Asia” includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. GDP = gross domestic product.

**FIGURE 1.2** Changes in GDP, by developing region, 1991–2016

![Graph showing changes in GDP, by developing region, 1991–2016](image)

Note: “Developing East Asia” includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. PPP = purchasing power parity; GDP = gross domestic product.
in 2000) in the two other middle-income regions of the world: Europe and Central Asia and Latin America and the Caribbean. Even without China, developing East Asia has more than doubled its GDP since 2000.

This resilience reflects, in part, the rise of the Chinese economy over the period as well as its increasing integration through trade and investment flows with the rest of the region. The Chinese economy today is almost five times larger than it was two decades ago. China is also now increasingly at the center of regional production and supply chains as well as being a major source of demand for commodities from other countries in the region. These links helped revive many regional economies from the shock of the Asian Financial Crisis by providing an additional source of external demand that complemented higher demand from the United States.

China’s impact was even more dramatic in the aftermath of the Global Financial Crisis. Its public investment-led stimulus helped sustain its own growth and, through its trade links to the rest of the region, growth elsewhere as well. Between 2005 and 2015, for instance, China’s capital goods imports from its developing ASEAN neighbors (mainly Malaysia, Thailand, and Vietnam) grew by almost 50 percent, while its intermediate goods imports from the region more than doubled.

**Structural change**

The region’s economies have also seen considerable structural change over the past two decades. In particular, in relative terms, their agricultural sectors have continued to shrink while their manufacturing and service sectors have grown, the latter continuously (figure 1.3). And as chapter 2 will show, these structural shifts have contributed significantly to productivity growth.

China’s structural transformation has been the most dramatic. The share of agriculture in value added fell from more than 20 percent in the mid-1990s and about 10 percent in 2000 to roughly 8 percent by the mid-2010s. Correspondingly, the value-added share of

**FIGURE 1.3 Changes in value-added shares in developing East Asia, by sector and country, 1996–97 to 2016–17**


Note: “Developing East Asia” includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. Results shown reflect the average value-added share for each two-year period. For Lao PDR, data for 1995-96 are used since they are more reliable, and for Myanmar, no 1996–97 data were available.
its manufacturing sector rose between the mid-1990s and the mid-2000s from about 24 percent to about a third and has roughly stabilized at that level. The share of services rose continuously, from about 40 percent in the mid-1990s to just over half in mid-2010s. Similar, albeit less significant, shifts are seen in other countries. For instance, in Malaysia, the agricultural share of value added fell from just over 11 percent to about 9 percent between the mid-1990s and the mid-2010s, while the share of services rose from about 45 percent to 52 percent. The share of manufacturing value added was stable between the mid-1990s and the mid-2000s, at just over 25 percent before falling marginally to around 23 percent in the mid-2010s. The trends in Thailand are broadly similar to those in Malaysia, although the expansion of services has been more muted. The pattern of structural change in the Philippines is a bit different in two ways. First, the share of services has always been higher—roughly half of value added in the mid-1990s and about 60 percent in the mid-2010s. Second, the value-added share of manufacturing has been roughly stable, on the order of 20 percent, which is also lower than in Malaysia or Thailand.

Although less sharply delineated, these trends also apply to employment shares. In China, the share of agricultural employment fell by more than 13 percentage points between 2000–07 and 2008–16 (de Nicola, Kehayova, and Nguyen 2018). The corresponding reductions for Indonesia and Thailand were 8 percentage points and 6 percentage points, respectively. In all these countries, employment shares expanded in services and (to a lesser extent) in industry. These changes are also observed in the smaller, lower-income economies of Southeast Asia: Cambodia and Lao PDR.

The expansion of manufacturing has been a major driver of growth and development across the region. China is now a manufacturing powerhouse. Its share in global manufacturing value added rose from less than 5 percent in 1994 to 25 percent by 2015 (Hallward-Driemeier and Nayyar 2017). The collective share of global manufacturing value added of the other developing East Asian economies almost doubled in the two decades since 1994 to just under 10 percent of the total, with each country increasing its share of global value added during this time. The five large ASEAN economies (Indonesia, Malaysia, the Philippines, Thailand, and Vietnam) have now emerged as major exporters behind the high-income economies and China in several of the main manufacturing subsectors. This growth in manufacturing, in turn, has relied in part on its links to China’s manufacturing success.

Manufacturing employment in East Asia—in China and beyond—has expanded substantially in the past two decades. China alone added almost 50 million manufacturing jobs between 1994 and 2014, while Malaysia added almost half a million (Hallward-Driemeier and Nayyar 2017).

Integration

The region is now well integrated through trade and investment links, both within itself and with the rest of the world. This integration is evident in its rising trade shares and FDI inflows. Figure 1.4 illustrates the growth in goods and services trade flows to and from developing East Asia since 2005 and how it has generally outpaced the growth in global trade flows.

Developing East Asia now accounts for about 15 percent of world trade in goods and services—almost 2.5 times its share in 1995. Its share of global FDI increased from 5 percent of the total in 1995 to about 8 percent in 2015 (Constantinescu, Mattoo, and Ruta 2018b). China stands out in both respects. Between 1995 and 2015, China’s share of world exports and imports grew from about 2 percent to 11 percent and from 2 percent to 10 percent, respectively. And its share of global FDI stocks rose from about 3 percent to almost 5 percent in this period, with its share of outward foreign investment rising from 0.5 percent to about 4.5 percent.

Two implications are particularly striking: First, several developing East Asian countries are now among the most active participants
in the global trade and investment system. Six of these 10 countries are now among the 50 largest trading nations, and 5 of them are among the top 50 FDI recipients globally (Constantinescu, Mattoo, and Ruta 2018b). Second, many of them have ascended to the top of the global trading system only recently and quickly. China is today the largest exporter of goods and services in the world but was only the 14th largest in 1995. Vietnam is another striking example; it went from 62nd in 1995 to 31st by 2015 in world goods and services exports (Constantinescu, Mattoo, and Ruta 2018b). And on FDI stocks, China is the fourth highest in the world (from 11th in 1995), while Vietnam’s global ranking rose from 56th in 2005 to 43rd by 2015 (Constantinescu, Mattoo, and Ruta 2018b).

One aspect of the region’s integration that has changed in the past two decades is the extent to which China is now a much more significant trading and investment partner for the rest of developing East Asia. In part, the rapid pace of China’s growth has increased its importance as both a source for imports and a market for exports for other countries in the region. Although this increase varies across countries, China’s export and import shares have increased by many multiples in the past two decades (figure 1.5). Similarly, Chinese foreign investment in the rest of the region increased almost 40-fold (in nominal U.S. dollars) between 2005 and 2014, to more than $4 billion. In Thailand and Indonesia, respectively, it increased almost 200-fold to about $900 million and over 100-fold to more than $1.2 billion.

China’s increasing importance as a trading partner also reflects the rise of regional value chains. China and the other countries of developing East Asia are closely connected through value chains both upstream and downstream. Some, such as Cambodia and Vietnam, are situated downstream in the production chain from China (for garments in the former and electrical equipment in the latter), as shown by the high share of Chinese value added in their gross exports.
Others, such as Malaysia, the Philippines and Thailand, are upstream of China, providing inputs into Chinese exports—for instance, in the electrical equipment industry, more than 40 percent of each of these countries’ exported value added is accounted for in Chinese reexports.

Consequently, developing East Asian countries are now among the most integrated into global value chains (GVCs), as figure 1.6 illustrates. This integration has taken the form mainly of backward participation in GVCs—that is, using imported inputs in exports. This process began in the 1990s, intensified in the first part of the 2000s with the emergence of China, and then slowed, in part because of the Global Financial Crisis. Forward participation in GVCs—the use of a country’s value added in other countries’ exports—has been increasing continuously, with a slight slowing due to the crisis.

Different developing East Asian countries have displayed different patterns of integration into value chains over time (figure 1.7). For example, the level of China’s backward integration slowed even before the Global Financial Crisis as it increasingly substituted domestically produced inputs for imported ones. At the same time, its forward participation in GVCs started rising in the early 2000s as it increased its exports of intermediate inputs and as regional value chains centered on China grew in prominence.

Leaving aside China, the level and pace of GVC integration differ across the region. Malaysia and Thailand have the highest levels of backward participation, while Indonesia, Lao PDR, and Myanmar...
FIGURE 1.6  GVC participation of developing East Asia relative to other regions, 1995–2011

Source: Constantinescu, Mattoo, and Ruta 2018b; World Bank staff calculations from the Organisation for Economic Co-operation and Development (OECD) Trade in Value Added (TiVA) database.

Note: GVC = global value chain. “Backward participation” is measured as the share of foreign value added in a country’s or economy’s total gross exports. “Forward participation” is a country’s or economy’s domestic value added that is reexported by other countries or economies, as a share of exports. “Developing East Asia” includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. “Other East Asia” includes Brunei Darussalam, Hong Kong SAR, China; Korea, Japan, Macau SAR, China; Singapore; and Taiwan, China. “Other ECA” = Europe and Central Asia (all income levels) except Western Europe. LAC = Latin America and the Caribbean (all income levels); MNA = Middle East and North Africa (all income levels); SAS = South Asia.

FIGURE 1.7  GVC participation of several developing East Asian countries, 1995–2011

Source: Constantinescu, Mattoo, and Ruta 2018b; World Bank calculations based on the Organisation for Economic Co-operation and Development (OECD) Trade in Value Added (TiVA) database.

Note: Backward participation is measured as the share of foreign value added in the total gross exports of a country. Forward participation is a country’s domestic value added that is reexported by other countries, as a share of the country’s exports. “Developing East Asia” includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. Figure excludes Lao PDR, Mongolia, and Myanmar because no comparable data are available for those countries.
have low levels. With respect to forward participation, Indonesia and the Philippines—the former because of its commodity exports and the latter on account of services exports and its reexports of electrical equipment—have the highest levels (and these levels have increased since 2000), while Cambodia lags. Cambodia and Vietnam stand out regarding the extent to which their backward participation has increased since the mid-1990s. The Philippines, in contrast, has seen its level of backward participation fall sharply since the mid-2000s.

The growing importance of regional value chains has also meant a shift in developing East Asia’s pattern of integration. In the 1990s, there was a much greater focus on integration globally. So, for instance, in the early 1990s, more than 53 percent of the trade of ASEAN countries was with economies outside the ASEAN+3 (other ASEAN economies plus the three other large East Asian economies: China, Japan, and Korea). This share remained at about this level in 2000 but fell to about 48 percent by 2015. Similarly, the share of trade among developing East Asian countries was about 5 percent in the early 1990s but grew to 18 percent by 2016.

**Digital connectivity**

Developing East Asia has become increasingly more connected. Cell phone subscriptions grew from an average of around 3 per 100 people in 2000 to 95 per 100 in 2016. Internet use has also grown rapidly, with about half of the population of developing East Asia now having internet access, up from just 3 percent in 2000 (figure 1.8).

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**FIGURE 1.8 Growth in cell phone and internet penetration in developing East Asia, 2000–16**

![Graph showing growth in cell phone and internet penetration in developing East Asia, 2000–16](image)

*Source: World Bank staff calculations, using World Development Indicators database.*

*Note: “Developing East Asia” includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam.*
Both cell phone coverage and internet use vary widely across developing East Asia. Internet use is especially high in Malaysia and has risen rapidly in the past decade in China, the Philippines, and Vietnam.

The World Bank’s Digital Adoption Index (DAI), which measures the extent of digital technology adoption across three key dimensions—governments, businesses and firms, and households—indicates that most countries in developing East Asia have achieved levels of digital technology adoption that are at or above what would be expected given their per capita income levels (figure 1.9).

Inclusion

Rapid growth has provided broad-based benefits to East Asia’s population and fostered economic inclusion. Evidence of this can be seen on many fronts. First, and most significantly, absolute poverty levels have fallen dramatically across the region. The shares of the extreme poor and moderate poor have fallen from more than half the region’s population in 2002 to less than an eighth in 2015 (figure 1.10). While China has led the way in this reduction—with its share of poor now below 7 percent (from about 58 percent in 2002)—the improvements have cut across the region. Malaysia and Thailand have virtually no extreme or moderate poverty by this measure. Indonesia has more than halved the share of its population in this category—to 31 percent in 2016 from 65 percent in 2002. And Vietnam has reduced its share to just over 8 percent in 2016, down from almost 70 percent in 2002 (figure 1.11).

Second, there have been big shifts across the region toward the economically secure and the middle class (figure 1.10). The share of these economic classes in the region’s population rose from about a fifth in 2002 to almost two-thirds by 2016. China; Malaysia and Thailand (among the larger economies); and Mongolia (among the smaller ones) have proportionately larger shares of their populations in this group.
On the other hand, Indonesia and the Philippines (among the larger economies) and Cambodia and Lao PDR are relatively underrepresented in these economic classes (figure 1.11).

Third, these improvements in household income have been generally matched by improvements in most nonmonetary dimensions of welfare (figure 1.12). School enrollment and educational attainment have risen substantially, notably in China, Indonesia, Malaysia, Thailand, and Vietnam. The population also has better access to health services as well as to clean water and sanitation. Consequently, child and infant mortality have fallen sharply. On average, across developing East Asia, infant mortality has fallen from a rate of more than 40 per 1,000 births to fewer than 15 per 1,000 in the two decades since 1995. Similarly, child mortality rates (under the age of 5) across the region have fallen from more than 50 per 1,000 births in 1995 to about 17 per 1,000 in 2016. Gaps between males and females have also fallen on a range of outcomes, notably educational attainment, employment, and wages.

Fourth, educational mobility in developing East Asia is high in terms of both relative and absolute intergenerational mobility (IGM). In absolute mobility, the East Asia and Pacific region is in the top three, just below the Middle East and North Africa and Latin America and the Caribbean (figure 1.13). Comparing mobility rates among the generation born in the 1980s across the six developing regions, East Asia has the highest relative mobility among the low- and middle-income regions, with a level close to that of high-income economies (Narayan and others 2018).

East Asia has also seen large improvements in educational mobility from the generation born in the 1950s to the generation born in the 1980s. The average share of individuals surpassing their parents in educational attainment has increased from 47 percent to 61 percent from the

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**FIGURE 1.11 Welfare distribution in developing East Asia, by country, 2002 and 2016**

Note: “Developing East Asia” here includes the following: China, Indonesia, Lao PDR, Malaysia, Mongolia, the Philippines, Thailand, and Vietnam. Figure excludes Cambodia and Myanmar because comparable data were not available for the period. “Extreme poor” = per capita consumption below the international poverty line ($1.90 per day at 2011 purchasing power parity [PPP]). “Moderate poor” = per capita consumption of $1.90–$3.20 per day. “Economically vulnerable” = per capita consumption of $3.20–$5.50 per day. “Economically secure” = per capita consumption of $5.50–$15.00 per day. “Middle class” = per capita consumption exceeding $15.00 per day.
1950s generation to the 1980s generation (Narayan and others 2018). Relative mobility in education likewise improved in this time span despite its already comparatively high starting point.

Gender gaps in mobility in East Asia have also closed steadily, similar to much of the developing world. The share of boys who are born to parents with education in the bottom half of their generation but who rise to the top quartile of their generation was almost 10 percentage points higher than the share for girls in the 1940s generation (Narayan and others 2018). This gap has almost disappeared among the 1980s generation.

Estimates for intergenerational income mobility are available only for a handful of East Asian countries. They show that although average relative mobility in the region is lower than that of high-income economies, it is similar to that of Europe and Central Asia as well as South Asia, and it is far higher than that of Sub-Saharan Africa, the Middle East and North Africa, and Latin America and the Caribbean.

**Government effectiveness**

The region’s well-deserved reputation for credible and capable economic management can be seen by looking at a sub-component of the Worldwide Governance Indicators (WGI). Most of East Asia does well relative to other middle-income countries in “government effectiveness”: a composite measure 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.”

It is striking that when the WGI was first formulated in the mid-1990s, most developing East Asian countries ranked significantly below other low- and middle-income countries at comparable income levels on

**FIGURE 1.12 Selected socioeconomic indicators for developing East Asia relative to middle-income countries in other regions, circa 1975 and 2015**

- **a. 1975, or earliest available**
  - Births attended by skilled health staff (% of total)
  - Average educational attainment (years of schooling)
  - Adjusted net enrollment rate, primary, both sexes (%)

- **b. 2015, or latest available**
  - Births attended by skilled health staff (% of total)
  - Average educational attainment (years of schooling)
  - Adjusted net enrollment rate, primary, both sexes (%)

Sources: Adapted from World Bank 2018b.

Note: “Developing East Asia” includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. UMICs = upper-middle-income countries. LMICs = lower-middle-income countries. LMICs and UMICs include all relevant countries outside developing East Asia with available data. All values refer to unweighted group means; country samples are balanced over time. For average educational attainment, all values are multiplied by 10 for presentational purposes.
A resurgent East Asia

Government effectiveness (figure 1.14). Two decades later, they now rank higher on this measure, on average, than other lower-middle-income and upper-middle-income countries.

What is changing and why it matters for developing East Asia

Against this backdrop of continued success in sustaining growth and raising living standards, it would be easy and tempting for the countries of East Asia to be complacent, particularly considering the challenges faced by low- and middle-income countries elsewhere in the world. Their governments could assume that more of the same will continue to bring them benefits and thus no major shift in their development model is warranted.

Yet, as policy makers across the region acknowledge, this conclusion is questionable considering the pace at which the world and the countries themselves are changing as well as the unpredictability of many of
those changes. Some changes are external to the countries and the region, while others reflect the transitions that have already occurred or are under way.

**Changes in the world**

The two major global shifts that likely will have the greatest impact on East Asia involve technology and trade patterns.

On technology, while the pace of change is accelerating, the precise implications of the changes are still not fully discernible. On trade, it is now clear that its rapid growth during the years preceding the Global Financial Crisis can no longer be taken for granted. The extended period of a broad global consensus on open trade also seems to be ending with the threat of rising protectionism, particularly in some advanced economies. This section explores facets of each of these shifts in relation to developing East Asia, including within the context of China’s large and growing economic role within the region.

**Technological change**

The spread of information and communication technology (ICT) is one aspect of technological change that is already under way and deeply entrenched. These advances—also termed the third industrial revolution or “Industry 3.0”—have helped underpin the fragmentation of production and the rise of GVCs that have characterized the most recent phase of development in East Asia. It is seen most clearly in the spread of mobile phones and the internet across the region (as well as across much of the world).

Increasingly sophisticated ICTs and the resulting declines in communications costs have allowed subtasks to be split and coordinated across locations that are more in line with comparative advantage. As a result, lower-income economies with more unskilled labor could focus on the production of the labor-intensive aspects of the production process, while countries with more skilled labor and capital could specialize in the more sophisticated production segments. Over time, these specialization patterns have shifted as countries’ comparative advantages changed, in line with the “flying geese” paradigm that was first propounded for East Asia in the era of mass production that preceded the advent of the internet.\(^{15}\)

This lengthening of value chains due to the spread of sophisticated ICT has also led to the growing use of professional services in manufacturing (the so-called “servicification” of manufacturing), which can be seen in the increase in services inputs in manufacturing processes as well as in preproduction (for example, research and development [R&D]) and postproduction (for example, marketing). This trend is encapsulated in the shift in the “smile curve,” which shows how value-added shares have changed over different manufacturing stages between the 1970s and the 21st century (figure 1.15). The curve has shifted up at both ends of the manufacturing process, illustrating the growing importance of services at these stages.

Although this digital revolution is already far advanced in many respects, it still has some way to go even in East Asia. Specifically, despite the rapid expansion in ICT use across the region (with more cell

![FIGURE 1.15 Increasing role of services in manufacturing, 1970s versus 21st century](image-url)

*Source: Hallward-Driemeier and Nayyar 2017.*

*Note: The “smile curve”—adapted from a proposal circa 1992 by Acer Inc. founder Stan Shih—depicts how value-added changes across different stages of bringing a manufactured product to market. R&D = research and development. “Embedded services” refers to services delivered through the manufactured good (for example, apps on a mobile phone).
phones than people in several countries), some countries still lag. Overall, a significant digital divide persists across countries in the region.

This digital gap is particularly stark on internet access, as proxied by use. Internet use in Lao PDR, Mongolia, and Myanmar is still only 20–30 percent, far lower than in China, Malaysia, and the Philippines—countries where 50–80 percent of people use the internet (as shown earlier in figure 1.8). There is also a digital divide within countries. Recent estimates indicate that about 1.7 billion lack broadband access, about 1.2 billion lack internet access, and 400 million still lack mobile phones (World Bank 2016b). For instance, even in China, nearly half the population still lacks internet access.

ICT adoption by businesses also still lags in several East Asian countries. So, although governments and consumers in most of these countries have achieved adoption levels on par with what would be expected given their per capita incomes, businesses have not. And this is true even in upper-middle-income countries such as China and Malaysia (figure 1.16).

A newer aspect of technological change is the advent of the so-called “disruptive technologies” or the fourth industrial revolution (“Industry 4.0”) that is under way in both high-income and low- and middle-income economies. The commercial applications of these technologies and their adoption by businesses, particularly in low- and middle-income economies, are still limited, and unlike ICT, the pace and direction of their advance is still uncertain.

This ongoing wave of technological change comprises three strands—physical, biological, and digital—each of which is interrelated and benefits from the others as new discoveries are made and progress achieved. Changes in physical technologies emerge from advances in molecular-level engineering and high-tech manufacturing, and they include advanced materials, advanced manufacturing (including advanced robotics), and additive manufacturing (or 3-D printing). New biological technologies are enabling the manipulation of genes and deoxyribonucleic acid (DNA) sequences to influence medical outcomes and correct genetic defects. Digital technological change includes transformations in such fields as finance (fintech), the internet of things (IoT), and artificial intelligence (AI).

These technological changes have the potential to lower costs but, even more
fundamentally, to change patterns of comparative advantage by altering the relative importance of labor and capital. For instance, cheaper and more user-friendly robots offer the prospect of productivity increases while substituting for labor. This prospect, in turn, will encourage labor-scarce high- and upper-middle-income economies to consider “reshoring” their production, marking a move away from the offshoring and fragmentation that currently characterize much of manufacturing. Similarly, additive manufacturing (3-D printing) will allow for the customization of production closer to consumers, which will both reduce the importance of scale economies in production and disrupt existing supply networks. Advances in AI and machine learning will drastically change the way knowledge work is organized and reinforce the incentives to automate.

The evidence regarding the pace of this phase of technological change is still sparse, especially in low- and middle-income countries, including those in East Asia. The patterns are clearest on the use of industrial robots. Their prices have fallen sharply. A recent study on adoption of industrial robots in six high-income economies estimates, for example, that robot prices halved in nominal terms between 1990 and 2005. When quality improvements over the period were accounted for, their prices in 2005 were only about 20 percent of their 1990 levels (Graetz and Michaels 2018). Consequently, the stock of industrial robots has risen rapidly in high-income economies, including Japan and Korea. China also has seen a sharp rise in the number of industrial robots, although the density of these (relative to the number of manufacturing workers) is still far lower than in high-income economies such as Korea and Taiwan, China (figure 1.17). Apart from the use of robots, there is also anecdotal evidence showing how 3-D printing is beginning to shift industrial location closer to consumers in high-income economies (Bhaskaran 2017).

China’s pace of automation will be especially important in determining industrial location, productivity, and labor market

FIGURE 1.17 Number and density of operational industrial robots in manufacturing, several East Asian economies, 2016

outcomes across the rest of developing East Asia. Given the pace at which manufacturing wages (figure 1.18) and unit labor costs (figure 1.19) are rising in China relative to its neighbors, there will be a continued incentive for Chinese manufacturers to conduct offshore activities elsewhere in the region, thereby deepening regional value chains. The countervailing force would be continued sharp declines in the prices of industrial robots, which will determine how much activity is reshored to China and at what pace.

**Pace and pattern of trade growth**

With East Asia’s past success having been built on its outward orientation, changes in the global environment for trade and their implications for trade growth weigh heavily on the region’s prospects. Two aspects stand out at this juncture.

First, the pace of global trade growth appears to have slowed since 2012, following its recovery from the collapse caused by the Global Financial Crisis (figure 1.20). And though East Asia did better than the rest of the world in its trade performance, it has not been spared by this global trade slowdown.
Despite some signs of revival in 2017, it now appears that the rapid growth in trade volumes of the first part of the 2000s were an aberration rather than the beginning of a long upward cycle. Looking forward, the growth in global trade will likely continue to be slow for two reasons: One reason for the rapid trade growth in the early 2000s—the expansion of global and regional value chains—seems to be maturing, including in East Asia. In addition, protectionism is rising in major high-income economies, including the United States and parts of Europe, which still account for a substantial share of East Asia’s exports.

Second, the close trade relationship that East Asia has developed with China is also changing dramatically. With the maturing of value chains (including with the prospect of more Chinese reshoring), trade flows are likely to grow more slowly. On the other hand, the pattern of China’s final demand is likely to shift as the Chinese economy continues to rebalance away from investment to consumption, including of services. Thus, China’s import demand is likely to shift over time toward consumer goods and away from capital goods and natural resources, which will favor some countries in the region more than others.

**Changes in the region**

East Asia’s development success has also changed the region. The region has been transformed from one made up largely of poor people living in low-income countries to one of middle-income countries, each with people distributed across economic classes that range from the extreme poor to the middle class and the very wealthy. This change in turn is leading to several other shifts, four of which are highlighted here in terms of their implications for East Asia’s development model.

**The rising middle class and public services**

With the fall in poverty has come an expansion—in share of the population and in absolute numbers—of the economically secure and the middle class. These groups are at low risk of sliding back into income poverty, and as a result are likely to be more concerned with their access to quality services such as education, housing, and water and sanitation. Yet, apart from China, the economic security these groups now enjoy has not translated into access to many services, either in terms of quality or quantity (figure 1.21). This gap between expectations and reality is one that is increasingly coming to the fore in many East Asian countries.

**Persistent vulnerability, rising inequality, and slowing mobility**

Despite the region’s success in reducing poverty and expanding the ranks of those who have economic security, almost a quarter of its population remains vulnerable to falling back into poverty (as shown earlier in figure 1.10). This proportion remains particularly high in some of the more populous countries, including Indonesia and the Philippines (as shown in figure 1.11).
Alongside this persistence of vulnerability, East Asia’s vaunted “growth with equity” model appears to be coming under strain. Income inequality, as measured through household surveys, has risen or remained high in several countries in developing East Asia through much of the 2000s. China and Indonesia—the region’s two most populous countries—stand out in this regard (figure 1.22).

Although measured inequality in some other countries (notably Malaysia and Thailand) has declined in the past decade, other evidence from across the region about inequality trends is less comforting. There are growing perceptions in many countries that inequality is too high and growing, with the issue gaining prominence in policy debates. For instance, an informal survey of policy makers identified inequality as a key concern across the region (Kanbur, Rhee, and Zhuang 2014). Significant majorities of the region’s population—more than 90 percent in China and more than half in the Philippines—now think that income differences in their own country are too large (World Bank 2018b). In Indonesia, 89 percent of those surveyed think that it is “quite” or “very” urgent to address inequality (World Bank 2016a). And in Vietnam, where measured inequality has remained relatively low and has declined since 2002, disparities in living standards were cited as concerns by a majority of those surveyed and by 8 in 10 urban residents, with young people more likely to worry about inequalities across all spheres of life—health, education, and incomes (World Bank 2014).

Other recent analysis also suggests that much of developing East Asia has been experiencing rising inequality in income and wealth. Recent work that combines tax record data on top Indonesian income earners with household survey data for the rest of the population finds that including the wealthiest Indonesians raises the measured Gini coefficient from 41 percent to 46 percent (Wai-Poi and others 2016). Because the exclusion of high-income individuals from household surveys is a widespread problem across countries, this finding suggests that income inequality across much of developing East Asia could actually be higher than the estimates in figure 1.22 suggest. Similarly, data compiled by Credit Suisse indicate that, since the early 2000s, wealth has become more concentrated among the upper percentiles in China, Indonesia, and to a lesser extent, Thailand.

In sum, the average East Asian now lives in a country where inequality has been rising, or has been perceived to be rising, for the past couple of decades. These perceptions along with the persistence of economic vulnerability contribute to a sense that, for many in the population, the opportunities for upward mobility are declining over time—another distinctive aspect of the East Asian model that is now changing.

FIGURE 1.21 Nonmonetary dimensions of poverty in developing East Asia, by welfare status, circa 2015

Source: World Bank East Asia and Pacific Team for Statistical Development. Note: “Clean water” refers to piped water, a protected well, water sold by a vendor, and “other” as specified in household surveys. “Proper sanitation” refers to flush toilets or improved pit latrines. “Poor in at least one dimension” refers to deprivation in one or more of the other three dimensions: no access to clean water, no access to proper sanitation, and no 16- to 18-year-olds living in the household enrolled in school. “Extreme poor” = per capita consumption below the international poverty line ($1.90 per day at 2011 purchasing power parity [PPP]). “Moderate poor” = consumption of $1.90–$3.20 per day. “Economically vulnerable” = consumption of $3.20–$5.50 per day. “Economically secure” = consumption of $5.50–$15.00 per day. “Middle class” = consumption exceeding $15.00 per day. Of the 10 “developing East Asia” countries, the sample included here are Indonesia (2016), Mongolia (2016), Myanmar (2015), the Philippines (2015), Thailand (2015), and Vietnam (2016).

a. Indicator measured at the household level.
b. Indicator measured at the individual level.
**Limited voice and accountability**

Despite its success in formulating and implementing effective development policies, developing East Asia does poorly in relation to other middle-income countries on voice and accountability (figure 1.23). Moreover, several of the countries have regressed rather than improved their relative standings on these measures in recent years. Yet, this aspect of state effectiveness is even more salient as countries transition from middle-income to high-income status. And there are forces within these countries, including those associated with the growth of the middle class, that will also increase the pressure for greater government accountability.

**Aging populations**

With affluence has come declining fertility and greater longevity across developing East Asia. The result is that populations are aging rapidly in most countries. Moreover, many countries are aging at historically unprecedented rates. The transition from aging (less than 7 percent of the population older than 65) to aged (more than 14 percent of the population older than 65) took almost 70 years in the United States and 115 years in France, but it will likely take 25 years in China and Mongolia, 20 years in Thailand, and 15 years in Vietnam (World Bank 2015). In this sense, much of the region will grow old before it gets rich.

An implication is that, across much of the region, the demographic dividend that helped fuel labor productivity growth in the past through the growth of the working-age population (those ages 15–64 years) is now either close to being exhausted or has even been reversed. The contribution of this demographic dividend to developing East Asia’s growth has been estimated at somewhere between one-third and 45 percent of the total. Its impact has come both through the rise in the working-age share of the population (resulting from the sharp fall in fertility in most countries in the region) and through improvements in human capital.

In many developing East Asian countries, the working-age population will shrink in the coming couple of decades. Between 2010 and
2040, the working-age population will fall by at least 10 percent in China and Thailand and by almost 5 percent in Vietnam (World Bank 2015). These trends highlight the challenges these countries will face in the next two decades in addressing the implications for productivity and inclusion, including their fiscal implications.21

Structure of the report

The chapters that follow look more closely into the opportunities and challenges that the countries of developing East Asia face in their aspirations to become high-income, increasingly middle-class societies in the face of rapidly changing national and global circumstances:

- **Chapter 2, Sustaining Productivity Growth**, summarizes country-level productivity trends in the region and places these in the context of the slowdown in productivity across the world. It analyzes the drivers of these productivity trends in relation to the development strategy that much of developing East Asia has adopted. In examining the challenges countries face and the opportunities they could grasp in sustaining productivity growth in the changing global and regional environment, special emphasis is placed on trade, innovation, and finance.

- **Chapter 3, Fostering Inclusive Growth**, examines how countries in the region can continue to ensure that growth is inclusive as they transition from middle-income to high-income status. After reviewing the factors that have contributed to “growth with equity” in the region, the chapter looks at how changing trade, technology, and the development process itself are creating challenges to the traditional development model, particularly through changes in the labor market and in rising demand for more advanced skills. The chapter concludes by examining how prepared countries are to ensure that their citizens will be able to participate successfully in their changing economic environments.

- **Chapter 4, Enhancing State Effectiveness**, examines the key institutional and governance challenges associated with developing East Asian countries’ efforts to transition from middle-income to high-income status. After reviewing the current state of state effectiveness in the region, the chapter examines East Asia’s emerging political economy and governance challenges. The discussion focuses on three potential entry points for addressing the region’s political economy and governance challenges—voice and accountability, transparency in government, and bureaucratic quality—as well as the challenge of financing countries’ high-income, increasingly middle-class agendas.

- **Chapter 5, Navigating a Changing World: Directions for Policy**, concludes by outlining policy directions that are pertinent to the challenges identified in this study and that apply broadly across the region as countries aim to realize their development aspirations over the next decade. These policies are broadly of two types: Some are emerging policy priorities that require special emphasis as countries aspire to high-income status in the face of rapidly changing economic circumstances. Others are foundational in nature, in that these are reforms that countries have been pursuing for some time but that remain important to sustaining growth and development in the medium term.

Notes

1. For convenience, unless otherwise specified, East Asia and developing East Asia refer throughout this report to these 10 middle-income countries: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. All references to income classifications of low, lower-middle, upper-middle, and high-income economies are those calculated using the World Bank Atlas method in terms of 2016 gross national income (GNI) per capita. These GNI per capita cutoffs are as follows: $1,005
(low-income); $1,006–$3,955 (lower middle-income); $3,956–$12,235 (upper middle-income); and $12,236 (high income).

2. For the economies in the first two waves of development noted earlier, the main elements of this model and its achievements were characterized in Birdsall and others (1993). This broad-brush characterization obviously abstracts from many country specificities of the approach but captures its key elements.

3. The Green Revolution refers to research and technology transfer initiatives that increased agricultural production in the developing world, beginning in the late 1960s. The initiatives resulted in the adoption of new agricultural technologies (in East Asia, most notably, high-yielding varieties of rice, combined with the expanded use of fertilizer and other agrochemicals); better control of water (for example, irrigation); and new cultivation methods, including mechanization.

4. Although government effectiveness can be thought of as an instrument of development, it can also be viewed as an outcome, and this is the sense in which it is treated in this section.

5. World Bank staff estimates indicate that Malaysia will reach the high-income threshold sometime between 2020 and 2024 (World Bank 2018a).

6. World Bank estimates of all sectoral value-added data for developing East Asia are based on the World Development Indicators database in addition to 1996–97 data from the National Bureau of Statistics of China.

7. Backward participation in GVCs is measured as the share of foreign value added in total gross exports of a country. Forward participation in GVCs is measured as the share of a country’s domestic value added in its exports that is reexported by other countries.

8. The estimates for Lao PDR and Myanmar use data from Eora multiregion input-output (MRIO) tables rather than the OECD Trade in Value Added (TiVA) data because the latter are not available for those economies.

9. The “extreme poor” are those whose per capita consumption is below the international poverty line ($1.90 per day at 2011 PPP), while the “moderate poor” are those whose per capita consumption is between $1.90 per day and $3.20 per day at 2011 PPP (also referred to as the “lower-middle-income class poverty line”).

10. The poverty data were developed by the World Bank East Asia and Pacific Team for Statistical Development, updating the poverty data analyzed in World Bank (2018b).

11. For definitions of these and other categories, see World Bank (2018b). In 2011 PPP terms, the economically secure are those with per capita consumption of $5.50–$15.00 per day, while the middle class comprises those with per capita consumption exceeding $15.00 per day.

12. Infant and child mortality data are from the World Development Indicators database.

13. Intergenerational mobility (IGM) can be measured for education as well as for income. Absolute upward IGM is defined as the extent to which the living standards (or education) of a generation are higher than those of their parents. Relative IGM is the extent to which an individual’s position on the economic (or educational) scale is independent of his or her parents’ position. See Narayan and others (2018) for additional details on how absolute and relative international mobility in education and income are defined and measured.

14. “Government effectiveness” is defined according to the Worldwide Governance Indicators (WGI) database 2017 (http://www.govindicators.org).

15. The “flying geese” paradigm is a model for the international division of labor based on dynamic comparative advantage, where the main driver is the “leader’s imperative for internal restructuring” because of increasing labor costs (Akamatsu 1962). As the comparative advantages (on a global scale) of the “lead goose” cause it to shift away from labor-intensive production to countries further down in the hierarchy, those having comparative advantage in labor-intensive production. The pattern then reproduces itself among the countries with lower relative labor costs, as countries’ comparative advantages continue to change over time. The East Asian experience is usually cited to typify this pattern.

16. Because all new technologies, including ICT, are “disruptive” at least to some extent, the term “disruptive technologies” is not used elsewhere in this report.

17. For a description of these technological strands and their diffusion across East Asia, see Bhaskaran (2017).
18. Analysis of wealth inequality is based on World Bank estimates, drawing on data from CSRI (2015). This discussion applies to wealth owned by the top 1 percent and 10 percent, respectively.

19. As noted earlier, although educational mobility in developing East Asia is high in relative and absolute terms, the region does less well on intergenerational income mobility. Among the few regional economies in which income mobility can be measured, average relative mobility is lower than the average for high-income economies, although similar to the averages for Europe and Central Asia as well as South Asia, and ahead of Sub-Saharan Africa, the Middle East and North Africa, and Latin America and the Caribbean. Among developing East Asian countries, income mobility estimates are relatively low in Southeast Asia compared with, for example, China and Mongolia.

20. For a summary of this and other evidence as well as analysis of the implications of aging for developing East Asia, see World Bank (2015).

21. Although these challenges will likely be significant for many countries in the region, they are not highlighted further in this report because they are discussed in detail in World Bank (2015), which also considers a range of policy options for addressing them.

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Introduction

The countries of developing East Asia have succeeded in improving their citizens’ living standards over many years, and in some cases, several decades. As encapsulated in Paul Krugman’s now-famous assertion about productivity and living standards, this success has come from their ability to maintain high rates of productivity growth over an extended period. By the same token, finding ways to sustain productivity growth in the face of ongoing changes in the world and in their economies will be among their key challenges.

This chapter begins by summarizing recent productivity trends at the country level in East Asia, looking at both output per worker (“labor productivity”) and total factor productivity (TFP), a related but more difficult-to-estimate measure of economic efficiency. These trends are placed in the context of the slowdown in productivity across the world and in their economies will be among their key challenges.

Productivity trends across the region and the world

The world appears to be in the midst of a productivity slowdown. As documented in Cusolito and Maloney (2018), global productivity has slowed since the Global Financial Crisis among low- and middle-income economies as well as high-income economies (figure 2.1). In the former, this slowdown followed an upswing in labor productivity growth since the early 1990s, which lasted longer and outstripped that of high-income economies. Developing East Asia has not been an exception to this trend of slowing productivity growth following on the crisis.
Nevertheless, over the longer term, most countries in the region have succeeded in fostering productivity growth, which has contributed to their rapid and sustained economic growth. As growth has proceeded across the major developing East Asian economies over the past two decades, levels of output per worker have been converging to the “productivity frontier” (defined as the level in the United States). The degree of convergence roughly reflects the countries’ relative per capita incomes, with Malaysia coming the closest to U.S. levels (figure 2.2). Notably—and predictably in light of its growth trajectory—China has been catching up faster since the early 2000s.

This catch-up to the frontier in output per worker across economies reflects to varying extents the relative roles of capital deepening (more capital per worker), the accumulation of human capital (more educated and healthier workers), and growth in TFP (greater economic efficiency). These trends are illustrated in figures 2.3 and 2.4 for physical and human capital. The increase in physical capital intensity (capital per worker) since 2000 is particularly striking for China since the mid-2000s and for Indonesia between 2005 and 2010.

TFP levels in these economies are also gradually catching up to the frontier (the United States) since 2000 (figure 2.5). Malaysia leads the pack, with a TFP that is more than 60 percent of U.S. TFP. However, the speed of convergence over this period differs across countries. From the turn of the century until the Global Financial Crisis, China, Malaysia, and Thailand were catching up faster than the other major economies. Since the end of the crisis, however, the pace of catch-up has slowed in those economies while not picking up in the other developing East Asian countries. Nevertheless, China’s TFP is now about 40 percent of the U.S. level, compared with less than 30 percent in 2000.

These trends in TFP and output per worker across developing East Asia in the past two decades reflect in part the differential impacts of the Asian Financial Crisis of 1997–98 and the Global Financial Crisis of 2008–09. Owing to the first of these,
output per worker fell sharply in four of the five major Association of Southeast Asian Nations (ASEAN-5) economies (Indonesia, Malaysia, the Philippines, and Thailand) but not in China and Vietnam. Their levels started to recover in the early 2000s, most rapidly in Malaysia and Thailand. TFP levels fell in all the major East Asian economies following the onset of the Asian Financial Crisis, with the sharpest declines occurring in Indonesia, Malaysia, the Philippines, and Thailand. A gradual recovery began in the late 1990s in all these countries except Indonesia, where it occurred later.

On the other hand, productivity levels in most countries remained relatively resilient to the Global Financial Crisis. TFP levels continued to rise in most of the large East Asian economies, although the pace of growth in most cases slowed following the crisis. Particularly striking in this regard is Malaysia, which has seen much slower growth in both TFP and output per worker after the crisis.

Drivers of East Asia’s productivity trends

These productivity trends highlight two points: First, the region’s major economies have generally sustained growth in labor productivity and in TFP over the past decade. Productivity growth has also generally been resilient. Second, the pace of growth in both output per worker and TFP has slowed in these economies in recent years, especially in the aftermath of the Global Financial Crisis.

This section examines the drivers of these productivity trends in greater detail. In doing so, it also looks at how the underlying drivers differ from those in other major middle-income economies.

Sources of productivity growth

The starting point for this analysis is to decompose growth in labor productivity (output per worker). This can be done in two ways, each of which provides complementary insights into the underlying mechanisms.
by which labor productivity changes over time. The first decomposition is to look at the contributions to labor productivity growth in terms of the accumulation of factors of production (physical and human) and growth in TFP. The growth in these components of labor productivity is shown below in Figure 2.6 for China and the ASEAN-5 economies before and after the Global Financial Crisis.

In most of these economies, the contribution of TFP growth in the period after the Global Financial Crisis has fallen substantially. In China, annual TFP growth fell from over 4 percent in the first part of the decade before the crisis to just over 1 percent following the crisis (de Nicola, Kehayova, and Nguyen others 2018). Similarly, Malaysia’s annual TFP growth turned negative after the crisis, whereas it had been growing by almost 2 percent annually before the crisis. Both Thailand and Vietnam saw negligible TFP growth after the crisis after registering reasonable growth in the period preceding it. The only exception to this trend was Indonesia, where TFP growth was about the same in the postcrisis period, albeit still slow.
This decomposition also highlights the importance of physical capital accumulation, which has been the main driver of labor productivity growth in the postcrisis period. Its significance is greatest for China and Vietnam in both periods. On the other hand, except in Vietnam, human capital accumulation has played a much less significant role in underpinning labor productivity growth, especially in the postcrisis period.5

A second decomposition of changes in labor productivity over time looks at changes in resource allocations “across” sectors and “within” specific sectors (figure 2.7). The first component reflects the process of structural transformation that occurs as economies develop and that leads to reallocation of resources from sectors such as agriculture to industry and services. This process is associated with increases in labor productivity to the extent that resources flow from less-productive to more-productive uses.

The second component includes two aspects of labor productivity growth within specific sectors. First, it takes account of the effects of shifting of resources between enterprises in a particular sector, including that associated with the entry and exit of enterprises. To the extent that these shifts reflect movements of resources toward more-productive enterprises, they will be associated with higher labor productivity. Second, it captures the labor productivity growth within existing enterprises due to the introduction of new products, processes, or technologies; the invention of new ideas; or the adoption of improved technologies and better management practices (Cirera and Maloney 2017).

For the large developing East Asian economies, within-sector changes accounted for much of the higher labor productivity growth in the post-2000 period (Foster-McGregor and Verspagen 2016; Herrendorf, Rogerson, and Valentinyi 2014; McMillan and Rodrik 2011; McMillan, Rodrik, and Verduzco-Gallo 2014; Rogerson 2017). As these economies have continued to develop, within-sector productivity improvements

---

**FIGURE 2.7 Contributions to labor productivity growth of intersectoral reallocation and within-sector productivity growth, major developing East Asian countries, 1990–2016**


Notes: TFP = total factor productivity. The developing East Asian countries—China and the five large economies of the Association of Southeast Asian Nations (ASEAN)—represent those for which reliable data are available. WDI data are in constant U.S. dollars, and Vietnam data are in constant Vietnamese dong. Aggregate labor productivity growth is decomposed as follows:

\[
\Delta \theta_i = \sum_{j=1}^{3} \theta_{i,j-1} \Delta \theta_{i,j} + \sum_{j=1}^{3} \Delta \theta_{i,j} \Delta \rho_{i,j-1} + \sum_{j=1}^{3} \Delta \theta_{i,j} \Delta \rho_{i,j},
\]

where \( \theta_i \) and \( \rho_i \) denote, respectively, economywide and sectoral labor productivity; \( \theta_{ij} \) denotes sectoral employment shares; the subscripts \( i \) and \( j \) refer, respectively, to the sector and year; and the \( \Delta \) operator denotes changes over time. The first term on the right-hand side captures the impact of within-sector productivity growth; the second and third terms capture the impact of structural reallocation—that is, respectively, shifts toward sectors with higher initial productivity and shifts toward sectors with higher productivity growth (de Vries, Timmer, and de Vries 2015). The analysis employs data on value added at U.S. constant prices and on employment for the following three sectors: agriculture, industry, and services.
have become more important than those due to structural transformation. This is consistent with the cross-country evidence that within-sector productivity growth accounts for most of the productivity change for middle- to high-income countries. Conversely, structural transformation is a more significant contributor as economies move from low- to middle-income status (Cusolito and Maloney 2018) because lower-income economies tend to display higher dispersion in productivity across sectors (McMillan and Rodrik 2011).

Across countries, at least two-thirds of labor productivity growth within sectors came within services and industry, with this proportion being much higher in most cases, especially in later periods (figure 2.8). The contribution of agriculture in most economies has declined progressively since the 1990s as countries developed.6

Except in Malaysia in both periods since 2000, the reallocation of labor away from less-productive to more-productive sectors also contributed to improving labor productivity (figure 2.7). The relative contribution to higher productivity of these cross-sectoral shifts in resources was highest in Indonesia, Thailand, and Vietnam.

This reallocation associated with structural transformation contributes to improving productivity in two ways:7 First, and most obviously, overall productivity rises to the extent that resources move away from sectors in which they contribute less and toward sectors in which they contribute more. Second, the reallocation can raise productivity within the relatively less-productive sectors. The agricultural sector in many East Asian countries, especially early in their development process, provides a good example of the latter link. The sector is typically characterized by low labor productivity when countries are poorer. So, when workers move to other sectors, the marginal productivity of labor in agriculture rises because land, a critical agricultural input, is largely fixed.

The contribution of structural transformation to overall productivity growth depends both on the extent to which resources move across sectors and the differential in initial labor productivity between the growing sector(s) and the sector(s) shrinking in relative terms. Each of these factors varies across developing East Asian countries. China went through more significant shifts in resources between the early 1990s and 2016 than did Malaysia or the Philippines. The employment share of Chinese agriculture dropped by more than 14 percentage points between 2000–07 and 2008–15, compared with 8 percentage points in Indonesia and less than 6 percentage

FIGURE 2.8 Sectoral decomposition of within-sector labor productivity growth, major developing East Asian countries, 1990–2016

Note: WDI data are in constant U.S. dollars, and Vietnam data are in constant Vietnamese dong. The developing East Asian countries—China and the five large economies of the Association of Southeast Asian Nations (ASEAN)—represent those for which reliable data are available.
points in Thailand. In addition, the initial gaps in productivity between the expanding sectors (industry and services) were higher in China than in either Indonesia or Thailand.

**Comparing developing East Asia with other middle-income economies**

The relative shares of labor productivity growth accounted for by TFP growth for large middle-income economies (the non–East Asian BRICS) before and after the Global Financial Crisis are shown in figure 2.9. Several aspects stand out both among these countries as well as in comparison with those in developing East Asia:

- **Significant variations in the role of TFP growth before and after the crisis.** In the Russian Federation, in the precrisis period, TFP growth was almost the entire reason for labor productivity growth. In India, on the other hand, TFP growth accounted for between a third and a quarter of labor productivity growth in both periods. In Brazil, however, TFP growth was a drag on labor productivity growth in the postcrisis period.

- **Lower labor productivity growth in most BRICS than in East Asia.** Brazil and South Africa stand out in this regard in both periods. And in the postcrisis period, labor productivity growth in Russia was also much lower.

- **Generally more robust TFP growth in developing East Asia before and after the crisis.** TFP growth across developing East Asia was also relatively more robust in

**FIGURE 2.9** Productivity growth before and after Global Financial Crisis, BRICS and major developing East Asian economies

![Graph](image-url)

Source: Penn World Tables version 9.0 data.

Note: TFP = total factor productivity.

a. BRICS = five major emerging economies: Brazil, Russian Federation, India, China, and South Africa.

b. The developing East Asian countries—China and the five large economies of the Association of Southeast Asian Nations (ASEAN)—represent those for which reliable data are available.
both periods than in these middle-income economies elsewhere, again except for India. And although it generally slowed across most of developing East Asia after the crisis, it held up in China, Indonesia, and the Philippines.

Explaining East Asia’s productivity trends

Thus, both structural transformation and changes within sectors—across enterprises and within them—have contributed to productivity growth in the large developing East Asian economies. This section discusses how each aspect is related to key elements of the development strategy followed by these countries.

Outward orientation. Policies that favored integration with the global economy led to the expansion of export-oriented manufacturing. In turn, this contributed significantly to raising productivity in much of East Asia because it also absorbed large numbers of relatively unskilled workers. This feature of manufacturing distinguishes it from sectors such as mining or high-end services, the expansion of which also provide potentially large productivity gains but little in the way of additional employment.9 The contrast between Vietnam and Mongolia is instructive: In Vietnam, 30 percent of the additional employment between 2005 and 2015 was in manufacturing. In Mongolia, less than 10 percent of the growth in employment between 2001 and 2013 came from manufacturing.10

Policies that favored export-oriented manufacturing boosted productivity by facilitating the movement of labor from relatively low-productivity, mostly subsistence agriculture to higher-productivity manufacturing. Moreover, these productivity gaps were highest in poorer countries, implying that the largest productivity gains occurred earlier in the development process.11 This point is also reinforced by the findings of the Growth Commission report (CGD 2008). In looking at 13 high-growth economies across the world (including 9 from East Asia),12 it concluded that, “mobility of resources was a feature of all.” For instance, as it noted, the share of agricultural employment in Malaysia fell from 40 percent in 1975 to less than 15 percent a quarter century later.

In addition to supporting productivity gains through structural transformation, outward-oriented trade policies have played a significant role in increasing within-sector productivity. More-open trade policies help channel the reallocation of resources toward more-productive firms, which can then expand in export markets and exploit scale economies (Melitz 2003). Moreover, outward-oriented policies can support productivity improvements at the firm level in several ways:

- Access to foreign markets can enhance learning from relationships with buyers (De Loecker 2013) and incentives for investment in technology (Bustos 2011).
- Greater foreign competition in domestic markets can exert pressure on margins and average costs (Helpman and Krugman 1985).
- Firms can benefit from the greater variety and higher quality of intermediate inputs associated with more-open trade (Grossman and Helpman 1991).
- Innovation by firms in the form of research and development (R&D) spending and patenting can be stimulated when they expand across the global arena.13

In addition, most developing East Asian countries have increased their participation in global and regional value chains since the early 2000s. Greater global value chain (GVC) participation contributes to higher labor productivity in two ways: First, GVC participation leads to greater specialization and a finer international division of labor (Gill and Kharas 2007; Grossman and Rossi-Hansberg 2008). In this respect, its effects are similar to factor-augmenting technical change. Second, it can increase productivity through more diverse inputs, learning externalities, and technology spillovers (Baldwin and Robert-Nicoud 2014; Li and Liu 2014).

Indeed, GVC participation is associated with labor productivity in developing East Asia. Constantinescu, Mattoo, and Ruta (2018c) find that, for the average developing
East Asian country-sector combination, the level of labor productivity and the level of backward GVC participation are positively associated. Although the strength of this association varies across country-sector combinations, it shows a consistent upward path.

Moreover—applying the econometric framework in Constantinescu, Mattoo, and Ruta (2017) to data on value added, output, and trade—Constantinescu, Mattoo, and Ruta (2018c) show that GVC participation has been a significant driver of labor productivity growth for developing East Asian economies (table 2.1). Total imports and total exports are significant drivers of productivity (Specification 1); the imported input channel is relatively more important (Specification 2); and imported inputs matter for productivity whether or not they are related to GVCs (Specification 3). On average, a 10 percent increase in the backward GVC participation of manufacturing sectors in developing East Asian countries corresponds to a 1.4 percent increase in labor productivity, other things being equal. However, although developing East Asia sees a productivity boost from GVC-related imported inputs or backward links, its magnitude (as estimated by the coefficients of the interacted terms) is not significantly different from the global average.

**Agricultural productivity.** This focus on export-oriented manufacturing in East Asia did not, however, imply a lack of emphasis on the agricultural sector. Although it shrank in relative terms, labor productivity in agriculture has risen in almost all of developing East Asia. So, despite its contraction in relative terms, the agricultural sector contributed to overall productivity growth in much of the region, particularly early in its development process. As figure 2.8 showed, among sectors, the contribution of agriculture to labor productivity growth was significant in the 1990s.

**Macroeconomic stability.** Effective and credible macroeconomic policies also facilitated structural transformation in much of developing East Asia. They helped provide a favorable environment for growth and investment. Specifically, low inflation and sustainable fiscal policies allowed these economies to remain resilient by avoiding repeated macroeconomic crises and growth interruptions.

### Table 2.1 Links between labor productivity, trade, and GVCs in developing East Asia

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Specification</th>
<th>Regressors</th>
<th>Average effect</th>
<th>Differential effect for developing East Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log of labor productivity</td>
<td>1</td>
<td>Log of gross imports</td>
<td>0.0752***</td>
<td>−0.0483</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Log of gross exports</td>
<td>0.0838***</td>
<td>−0.0541</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Log of gross final imports</td>
<td>−0.0185</td>
<td>−0.0917**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Log of gross intermediate imports</td>
<td>0.141***</td>
<td>0.0847</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Log of gross final exports</td>
<td>0.0161</td>
<td>−0.131*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Log of gross intermediate exports</td>
<td>0.0429**</td>
<td>0.0395</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Log of gross final imports</td>
<td>−0.0266*</td>
<td>−0.027**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Log of FVA embodied in domestically absorbed output</td>
<td>0.0879***</td>
<td>0.0622</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Log of FVA embodied in exports (GVC backward participation)</td>
<td>0.140**</td>
<td>0.0138</td>
</tr>
</tbody>
</table>

*Source: Constantinescu, Mattoo, and Ruta 2018c.
Note: FVA = foreign value added; GVC = global value chain.
Even after the major shock that several of them suffered during the Asian Financial Crisis, they were able to recover quickly, in part because they focused on undertaking the needed adjustments in exchange rate and fiscal policies as well as corporate governance and financial sector reforms. These measures enabled these economies to reestablish the basis for sustained growth early in the 2000s, managing to shrug off even the headwinds from the Global Financial Crisis.

**Human capital investments.** Another key element of the strategy followed across much of developing East Asia concerns the investments and policies that these countries undertook to ensure a basic level of human capital among the populations. On education, in particular, they emphasized increasing literacy and numeracy—also referred to as “foundational skills” and “basic cognitive skills” (see chapter 3 for a discussion of skills).

The impact of additional schooling on productivity can be inferred in part by looking at how individual earnings are affected. Globally, it has been estimated that an additional year of schooling raises earnings by 8–10 percent, whereas the average exceeded 10 percent for a sample of six developing East Asian economies for which recent estimates are available (World Bank 2018b).

Innovation. An important source of within-sector productivity growth in manufacturing across much of East Asia has been innovation within the manufacturing sector. In analyzing its contribution, it is useful also to view innovation broadly. Specifically, innovation is “the introduction of new products, technologies, business processes, and ideas in the market, as well as the invention of new ideas” (Cirera and Maloney 2017, xix). In this broad sense, innovation encompasses both the origination of knowledge (for instance, in the form of patents that result from R&D spending) and the assimilation and application of existing knowledge through bringing new products to market or introducing new business processes.

Building on this view, box 2.1 summarizes firm-level evidence from World Bank Enterprise Surveys in eight developing East Asian countries. This analysis shows the range of innovation activities undertaken by firms. It also highlights that product and process innovations are much more common than R&D activities among firms in these countries. Moreover, purchases of technology licensing are an important innovation input among firms in these economies, and more common than R&D activities in many countries. Finally, among these developing East Asian economies, the share of firms that undertake R&D activities tends to fall as countries get richer—a pattern that mirrors a global trend.

Innovation performance globally increases with per capita gross domestic product (GDP). This pattern is seen in figure 2.10, which shows how countries’ innovation performance (as measured by the Knowledge and Technology Output subindex of the Global Innovation Index (GII)) relates to their per capita income levels. By this measure, all East Asian countries covered by the GII except Indonesia have innovation outputs above the levels that might be expected given their income levels.

A key mechanism through which this innovation performance was achieved was the inflow of foreign direct investment (FDI). As noted by Growth Commission report, “As well as money, FDI can bring a familiarity with foreign production techniques, overseas markets, and international supply chains” (CGD 2008, 42). This reliance on FDI as a means of technology transfer in East Asia has meant that most countries have not needed to spend extraordinarily high shares of GDP on R&D relative either to their high-income counterparts or other low- and middle-income economies. Developing East
The diversity of innovation activity in developing East Asian economies, which is consistent with an expansive view of innovation, can be seen from firm-level data from recent World Bank Enterprise Surveys in eight countries: Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, and Vietnam.

Four conclusions emerge from this analysis.

First, firms’ innovation activities encompass a range of product, process, organizational, and marketing innovation. These innovation activities occur in all sectors, with information technology (IT) services and other service sectors showing the highest innovation rates (figure B2.1.1).

Second, once the novelty of reported innovations is accounted for, the proportion of firms reporting product innovations that are new to the market is positively correlated with the country’s income level (figure B2.1.2). This corrects for firms in lower-income countries being more likely to report marginal innovation or even imitation as innovation.

Third, the share of firms that report innovation (product or process) is much larger than those that reported formal research and development (R&D) activities. In particular, formal innovation...

Box continues next page
BOX 2.1 Innovation patterns in developing East Asia: Evidence from enterprise survey data (continued)

FIGURE B2.1.3 Firms’ use of innovation inputs and innovation rates in several developing East Asian countries, circa 2015

![Graph showing firms' use of innovation inputs and innovation rates in several developing East Asian countries, circa 2015.]

Note: The survey year analyzed for each country is either 2015 or 2016, depending on data availability. Tabulations are adjusted by sampling weights.

FIGURE B2.1.4 R&D intensity, R&D incidence, and GDP per capita in several developing East Asian countries, circa 2015

![Graph showing R&D intensity, R&D incidence, and GDP per capita in several developing East Asian countries, circa 2015.]

Source: Iootty 2018 using World Bank Enterprise Survey data.
Note: Countries include Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, and Vietnam. The survey year analyzed for each country is either 2015 or 2016, depending on data availability. Research and development (R&D) intensity is computed as the average logarithm of R&D per worker in U.S. dollars, adjusted by sampling weights; R&D incidence is computed as the share of firms doing R&D using sampling weights. GDP = gross domestic product; PPP = purchasing power parity.

...training for development of innovative product or process is the most frequently used innovation input across all countries covered by the Enterprise Survey dataset (figure B2.1.3). Many enterprises also cite purchases of technology licenses as a frequently used innovation input, which reinforces the need to view innovation inputs more broadly than R&D spending.

Finally, regarding R&D intensity (measured as the total R&D expenditures per worker), Indonesia is an outlier to the regional pattern that shows a positive association with income (the red line in figure B2.1.4). On the other hand, R&D incidence (the proportion of enterprises that undertake R&D) decreases sharply with income level (the green line in figure B2.1.4), a result that is robust to whether or not Indonesia is included. So, at least for this set of East Asian economies, a smaller fraction of firms undertakes R&D as income level increases, while R&D spending among these firms rises with the country’s gross domestic product (GDP). This result is consistent with findings at a global level in Cirera and Maloney (2017), which also uses Enterprise Survey data.
Asian countries on average have tended to spend less on R&D (as a share of GDP) than Organisation of Economic Co-operation and Development (OECD) countries and roughly the same as other low- and middle-income countries with innovation outcomes no worse and even somewhat better than predicted by their income levels (figure 2.11).

**Finance.** East Asia’s financial system facilitated productivity growth through its links both to promoting trade and encouraging innovation. The initial wave establishing production networks in East Asia reflected the offshoring of Japanese manufacturing to Southeast Asia in the mid-1980s—after the Plaza Accord of 1985 and the subsequent appreciation of the Japanese yen relative to the U.S. dollar and European currencies. FDI flows and international bank lending primarily from Japanese firms and banks helped finance these production networks and their subsequent expansion. On the one hand, bank credit provided the needed short-term trade finance. On the other hand, FDI flows provided the long-term financing needed for capital investments and the financing of innovation, particularly in countries such as Indonesia, Malaysia, and Thailand (Gill and Kharas 2007).

This system of financing worked well in facilitating both trade and some innovation. But it depended crucially on the absence of currency or credit risk. In the middle-income countries of Southeast Asia during the late 1980s and the early 1990s, the former was assured through a system of fixed exchange rates, while the latter relied on credit appraisals by local banks. This system was weakened and eventually broke down in the lead-up to the Asian Financial Crisis in 1997. Credit risks rose as portfolio capital flows expanded and firms and local banks expanded into non-tradables, notably real estate. Poor supervision of banks meant that these risks associated with rapid credit growth went unaddressed. The macroeconomic policy framework, which tried simultaneously to maintain a fixed exchange rate system along with capital account liberalization and an easing of monetary policy, eventually broke down. The Asian Financial Crisis was the result.

**FIGURE 2.10** Innovation output index, by GDP per capita, several developing East Asian and other countries, 2017

![Graph showing innovation output index](image)

Source: Iloppy 2018, using data from Global Innovation Index (GII) and World Development Indicators datasets. Note: Innovation output performance is captured by the “Knowledge and Technology Outputs” pillar of the GII. Curve represents the fitted values. GDP = gross domestic product; OECD = Organisation for Economic Co-operation and Development; PPP = purchasing power parity. The GII does not cover the following developing East Asian countries: Lao PDR, Mongolia, and Myanmar.

**FIGURE 2.11** Distribution of R&D spending as a share of GDP, by country category

![Graph showing distribution of R&D spending](image)

Source: World Development Indicators database. Note: GDP = gross domestic product; R&D = research and development; OECD = Organisation for Economic Co-operation and Development, a proxy for high-income countries. “Developing East Asia” here includes the following countries: Cambodia, China, Indonesia, Malaysia, Mongolia, the Philippines, Thailand, and Vietnam. (The figure excludes Lao PDR and Myanmar, for which these data are not available.) The outer edges of the boxes in this figure delineate the 25th and 75th percentile of the distributions and the line within the boxes represents the median values. The two lines outside the boxes show the 10th and 90th percentile of the distributions. The data are the averages for the period 2011–15.
Since the crisis, along with the continued growth in FDI flows, capital markets have deepened in much of developing East Asia (Gill and Kharas 2007). These deeper capital markets, which have also featured greater flows within the region, have helped support productivity growth in two ways. First, they have been part of the region’s armory in building resilience against another financial crisis. By helping to reduce dependence on bank credit, the attendant risks that contributed to the Asian Financial Crisis have been tempered.

Second, this deepening of capital markets has also likely helped support productivity growth following the reasoning in Rajan and Zingales (1998). As countries get richer, sectors that rely more on finance external to firms become more important. These firms need more formalized capital markets and a shift away from relationship-based banking. Some evidence that this aspect matters, particularly for upper-middle-income countries such as those in developing East Asia, comes from a recent study on high-growth firms (World Bank 2018a). It finds that high-growth firms in sectors more dependent on external finance in upper-middle income countries grow faster where financial development is higher.

As documented in a background paper for this study (Abraham, Cortina, and Schmukler 2018), four aspects in which capital markets in developing East Asia have been deepened since the Asian Financial Crisis are noteworthy. The first is the rapid growth in issuance activity of East Asian firms in capital markets since the late 1990s (figure 2.12). This trend is particularly marked in the period after the 2008–09 Global Financial Crisis, especially in Indonesia, the Philippines, and Thailand.

The second aspect of this deepening of capital markets has been driven by a broader use of domestic markets relative to international or interregional markets (figure 2.13). In the median developing East Asian economy, the share of domestic issuances rose from 79 percent to 98 percent between 1990–98 and 2000–16 in equity markets and from 34 percent to 66 percent in corporate bond markets. The increase in the share of domestic issuances in bond markets was also accompanied by a decline in the share of debt issued in foreign currency from about two-thirds of the total before the Asian Financial Crisis to one-third in 2008–16.

Third, with this growth in capital raising activity, an increasing number of firms in these countries and a rising proportion of listed firms have been using equity and corporate bond markets to obtain financing. In the median developing East Asian economy, the number of issuing firms per year rose from 118 in 1990–98 to 162 in 2000–16, with the most rapid increase occurring in the use of equity markets. Across the same period, the proportion of listed firms across developing East Asia using equity markets rose from 22 percent to 61 percent and the proportion using bond markets rose from 17 percent to 55 percent.

Finally, firms in the region that actively use capital markets tend to grow faster than those that don’t use them. The median equity and bond issuing firm increased its assets at an annual rate of 15.4 percent and 14.7 percent, respectively, compared with 6.3 percent for the median nonissuer.

Sustaining productivity growth in East Asia: Challenges and opportunities

Countries in the region have done well in sustaining productivity growth over an extended period, particularly as they made the transition from low- to middle-income status. Nevertheless, they still face the challenge of sustaining productivity growth as they seek to transition from the middle- to high-income ranks. As noted in chapter 1, labor productivity and human capital levels in developing East Asian countries still lag behind the levels that countries like Chile and the Republic of Korea had achieved at the time they reached high-income status. Moreover, much of developing East Asia has also seen productivity growth slow recently, and like advanced and emerging economies elsewhere, these
countries must now find ways of reactivating it in the face of a changing global, regional, and domestic environment. This section highlights the main challenges they face in this regard—some exogenous (as with the slowing of global trade) and others a reflection of their policy choices (as with the nature of trade agreements and services sector restrictions). These challenges also highlight opportunities that they could seize going forward.

**Slowing global trade**

Openness to trade has been a major factor in East Asia’s development success. So, it is...
comforting that global trade rebounded in 2017 with trade volumes growing at their fastest pace since 2011, which was right after the Global Financial Crisis. However, longer-term optimism on this count may be premature because it appears that the slowing of trade growth in the 2000s has a structural element that goes beyond and predates the slowdown in postcrisis global growth. Specifically, the relationship between trade and income appears to have shifted over time. The slowing of global trade is related to this lower long-term trade elasticity. In turn, this lower elasticity is primarily reflected in the fall of the goods trade elasticity, particularly for manufactured goods.

Several reasons have been put forward for the slowing of global trade growth, with the main factors including the following:19

- **Changes in the structure of trade** that have led to the maturation of global value chains in the 2000s
- **Changes in the composition of GDP**, particularly the falling share of investment in GDP
- **Changes in trade policies**, related to both the pace of trade liberalization and the rise of protectionism.

The evidence indicates that although each of these factors (which are interrelated) has played a role, the most significant contributor
to the slowing of global trade is the slowing expansion of global supply chains in the 2000s, particularly since the Global Financial Crisis.

The maturation of value chains, including in East Asia, primarily reflects technological change. The rapid expansion of global value chains in the 1990s was a result of the spread in information and communication technology (ICT), which made it feasible for parts and components to be imported, processed, and reexported. With this shock (“Industry 3.0”) having been largely incorporated, the expansion of value chains slowed in the 2000s. Whether they will continue to expand in the future, and at what pace, depends on ongoing technological change (“Industry 4.0”). Many of those emerging technologies, such as automation, will favor the reshoring of production and imply a shortening of value chains. Given the role of value chains in promoting productivity growth in East Asia, this prospect should be of concern.

Changes in trade policies have contributed relatively less to the slowing of global trade since the early 2000s. However, their salience appears to be increasing now with growing protectionism in many high-income economies and a reduced appetite for further trade liberalization. In particular, the share of trade remedy initiations (which signal the start of a government investigation on imports allegedly hurting domestic producers) rose sharply in 2016 and remained high in 2017 (Constantinescu, Mattoo, and Ruta 2018b).

**Shallow and fragmented trade agreements**

The “depth” of trade agreements is of particular relevance in promoting productivity. Preferential trade agreements (PTAs), which are proliferating globally and in developing East Asia, can be characterized in terms of their range of coverage of policy areas. “Shallow” PTAs are narrowly focused on tariffs and border measures, whereas “deep” agreements go beyond these areas to cover such aspects as competition policies and intellectual property rights (Lawrence 1996). To examine this in the context of East Asia, it is worth looking at the framework of PTAs within which these countries now operate.

The framework of agreements governing trade flows across East Asia has changed significantly since the 1990s and into the 2000s, both through World Trade Organization (WTO) accession and PTAs. All the countries are now members of the WTO, with the accession of Lao PDR in 2013. The ASEAN-4 economies (Indonesia, Malaysia, the Philippines, and Thailand) along with Myanmar have been members since the WTO’s inception in 1995, and Mongolia joined in 1997. Following China’s accession in 2001, Cambodia joined in 2004, and Vietnam in 2007.

Alongside the process of WTO accession, countries in the region have now become involved in a large and growing number of PTAs. These agreements—which, as in other regions, have been likened to a “noodle bowl”—have now grown to 36. Several of these (such as ASEAN) involve multiple countries so that, on average, each country has an agreement with eight partners. These PTAs in combination with multilateral and unilateral policy reforms have resulted in a sharp reduction in the level of applied tariffs across the region.

The content of many of these trade agreements has also deepened over time. For example, ASEAN initiated trade integration in 1992 as a free trade area by liberalizing tariffs and border measures on goods trade. In 1995, it added protocols that covered services and intellectual property rights, followed by an investment agreement and dispute settlement mechanism in 1996 and a framework agreement for the mutual recognition of standards in 1998. Moreover, some of these rules (as with investment) are legally binding, while for others, such as intellectual property rights protection, cooperation is only on a “best endeavor” basis (Constantinescu, Mattoo, and Ruta 2018c).

However, despite the increase in the number of trade agreements the region’s countries have signed, the agreements remain shallow and fragmented. A summary of the policy areas covered by the main PTAs to which developing East Asian countries belong is shown in table 2.2. Several gaps
### TABLE 2.2 Content of preferential trade agreements, developing East Asian countries, 2015

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>ASEAN-FTA</th>
<th>China-Costa Rica</th>
<th>China-Peru</th>
<th>Malaysia-Australia</th>
<th>New Zealand-Malaysia</th>
<th>Chile-China</th>
<th>ASEAN-Korea</th>
<th>Australia-Thailand</th>
<th>Iceland-China</th>
<th>China-New Zealand</th>
<th>Thailand-New Zealand</th>
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<tbody>
<tr>
<td><strong>WTO Plus</strong></td>
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Source: Hoffman, Osnago, and Ruta 2017; World Bank “Content of Deep Trade Agreements” dataset.
Notes: Table includes free trade agreements (FTAs) and economic integration agreements (EIA) notified to the World Trade Organization (WTO) before November 2015. A check mark indicates coverage of that issue; an “x” indicates no coverage. ASEAN FTA = Association of Southeast Asian Nations Free Trade Area. Table lists policy areas covered in at least three agreements. “WTO Plus” designates commitments that go beyond those specified by the WTO. “WTO Extra” designates commitments in areas that are not covered by the WTO. AD = anti-dumping measures; CVM = countervailing measures; GATS = General Agreement on Trade and Services; IPR = intellectual property rights; SME = small and medium enterprise; SPS = sanitary and phytosanitary measures; STE = state trading enterprise; TBT = technical barriers to trade; TRIMS = Trade-Related Investment Measures; TRIPS = Trade-Related Aspects of Intellectual Property Rights.
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</tbody>
</table>
are noticeable. First, some policy areas covered by WTO agreements—such as public procurement, subsidies, and state trading enterprises—are not included in most East Asian PTAs. Although multilateral rules apply in all these cases through countries’ membership in the WTO, these gaps illustrate that regional rules tend to be weaker in East Asia than in other low- and middle-income regions, because PTAs in these other regions have chosen to go beyond WTO commitments. East Asia’s PTAs also have limited coverage of areas such as competition policy, intellectual property rights, and movements of capital, which are not regulated by the WTO.

This lack of depth in the region’s trade agreements matters for productivity growth because it has reduced the pressures for further lengthening value chains. Signing deep PTAs doubles trade in parts and components and increases reexported value added by about 22 percent (Laget and others 2018). The intuition is that deep provisions of trade agreements—such as better protection of foreign investment and intellectual property rights, stronger competition policies, and a level playing field for state-owned enterprises—all contribute to greater specialization and the deepening of GVCs. This could be particularly relevant to developing East Asia as countries seek to go beyond labor-intensive manufactures to expanding their production of more sophisticated goods and services.

The lack of depth in East Asia’s trade agreements also stunts within-sector productivity growth by reducing the pressures for reallocations of inputs from less-productive to more-productive firms. In this sense, it helps sustain policies that allow relatively less productive firms to continue to have disproportionately large access to resources, hence depressing overall productivity in the sector. Analysis for four East Asian countries (de Nicola, Kehayova, and Nguyen 2018) shows that the potential gains from reallocations within specific manufacturing subsectors are substantial (table 2.3).21 The good news, however, is that in Indonesia and Malaysia, the potential productivity gains declined in the most recent period, indicating that reforms have reduced somewhat misallocation in these economies.

### Weakening potential for manufacturing-led structural change

The scope for productivity gains from further reallocations of economic activity to manufacturing could be in doubt across East Asia for several reasons, including the impacts of ongoing technological change. First, the share of manufacturing in GDP is falling globally. Since the mid-1990s, almost three-quarters of countries have seen a decline in this share. This included half of the 92 countries whose global share of manufacturing had expanded during this period (Hallward-Driemeier and Nayyar 2017).

#### TABLE 2.3 Potential productivity gains from policy-induced reallocation within manufacturing subsectors, several East Asian countries, 2000–07 and 2008–15

<table>
<thead>
<tr>
<th>Period</th>
<th>Malaysia</th>
<th>Indonesia</th>
<th>Philippines</th>
<th>Vietnam</th>
</tr>
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<tbody>
<tr>
<td><strong>Without correction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000–07</td>
<td>95.9</td>
<td>169.9</td>
<td>98.0</td>
<td>—</td>
</tr>
<tr>
<td>2008–15</td>
<td>96.0</td>
<td>176.3</td>
<td>103.5</td>
<td>98.4</td>
</tr>
<tr>
<td><strong>With common correction for 2000–15</strong></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>2000–07</td>
<td>109.7</td>
<td>107.5</td>
<td>91.9</td>
<td>—</td>
</tr>
<tr>
<td>2008–15</td>
<td>75.0</td>
<td>104.4</td>
<td>82.8</td>
<td>25.8</td>
</tr>
</tbody>
</table>

Source: Country data as detailed in de Nicola, Kehayova, and Nguyen 2018.

Note: — = not available.

a. These estimates do not correct for measurement error.

b. These estimates assume the bias from measurement error is common across both periods considered and is appropriately corrected for.
While this deindustrialization trend is most evident in high-income countries, it also includes several developing East Asian countries with significant manufacturing sectors, including China, Indonesia, Malaysia, and the Philippines (figure 2.14).

Second, the shares of manufacturing value added and employment have been peaking at both lower levels and lower per capita incomes than in earlier periods. This stylized fact has been termed “premature deindustrialization,” although there is still some debate both on how real the actual phenomenon is and on the underlying reasons for this pattern, including whether the more prominent role that services subsectors play in manufacturing is a factor that distorts comparisons over time. Figure 2.15 illustrates this point by showing that the peak share of manufacturing employment (as a share of total employment) in today’s high-income, upper- and lower-middle-income, and low-income economies has shifted progressively lower by income category. Most of today’s high-income economies have already experienced this shift.
economies saw their share of manufacturing employment peak at levels almost twice as high as those in today’s lower-middle-income economies.

East Asia’s experience illustrates this point when the early industrializers are compared with the later industrializers. In Indonesia and the Philippines, the share of manufacturing in total employment peaked at 13.5 percent and 12 percent, respectively, at per capita incomes of $1,042 and $846 (in constant 2010 dollars). In contrast, the peak shares of manufacturing employment in Korea and Singapore were 28 percent and 30 percent, respectively, at per capita incomes of $7,718 and $10,478 (also in constant 2010 dollars). If this trend is real (and there is still some debate on that), it does not augur well for the likelihood of East Asia’s lower-middle-income countries to emulate the success of their more-affluent predecessors in relying on manufacturing exports to propel growth.

Third, high-income economies, along with China, remain the dominant exporters across major manufacturing sectors, and some aspects of ongoing technological change are likely to solidify the advantages of these incumbents. In all five of the main manufacturing sector groups—low-skill, labor-intensive tradables; medium-skill global innovators; high-skill global innovators; commodity-based regional processing; and capital-intensive regional processing—most of the top 10 exporters are still high-income economies, with China being the notable exception (Hallward-Driemeier and Nayyar 2017). Emerging technologies such as advanced robotics and 3-D printing could lead to the reshoring of production by reducing the importance of wage competitiveness (with robotics and the move to “smart factories”) and limiting the potential for scale economies with an emphasis on customization (with 3-D printing). Although these technologies are still in their early stages, their potential could pose a challenge for developing East Asia (other than China) to deepen and widen its manufacturing footprint.

**Restrictive services sector policies**

It is striking that East Asia’s trade reforms, including those achieved through the PTAs discussed earlier, have gone much further on goods trade than they have on trade in services. This region, one of the keys of whose success has been its ability to expand and diversify manufactured exports, including through FDI flows, has been much less willing to open its services sectors to trade and foreign investment flows. Yet, there is now robust evidence that services trade can be a powerful engine for productivity growth, including through its effects on extending value chains and its links with ongoing technological change.

The asymmetric opening of East Asia’s trade between goods and services is illustrated in figure 2.16. It maps countries’ levels of tariff protection (which apply to goods imports) against a measure of service sector protection. Except for Cambodia and Mongolia, all countries in the region are in (or close to) the upper-left quadrant, indicating that their levels of tariff protection are below the global median, while their levels of service sector protection are above the global median.

As interesting is the pace of service sector reform across countries over the past couple of decades. In countries that have acceded relatively recently to the WTO (Cambodia, China, and Vietnam), that process led to greater competition in the provision of such services as telecommunications, finance, and transport through a move away from state-owned monopolies. On the other hand, in the ASEAN-4 economies that had acceded to the WTO in the 1990s (Indonesia, Malaysia, the Philippines, and Thailand), the openness of the services sector, while higher at the turn of the century, has remained relatively unchanged since.

The types of policies that result in the restrictiveness of service sector policies across East Asia are also striking. The problem stems mainly from restrictions on entry, ownership, and operations within various subsectors rather than the presence of public sector
monopolies or the complete closing of services markets. As a result, the playing field is tilted against foreign providers because of the opaqueness and discretion that is prevalent in the allocation of licenses, which is accentuated in many countries by lack of accountability because regulators do not have to provide a rationale for rejecting license applications.23

Research on several low- and middle-income countries offers examples of the significant impact of openness to services on manufacturing productivity. Reforms in these countries visibly transformed services sectors, with greater openness and improved regulation leading to dramatic growth in domestic and foreign investment. Local manufacturing firms were no longer at the mercy of inefficient public monopolies but could now source services from a wide range of domestic and foreign providers operating in an increasingly competitive environment. As a result, they had access to better, newer, more reliable, and more diverse business services. These improvements enhanced firms’ ability to invest in new business opportunities and better production technology, to exploit economies of scale by concentrating production in fewer locations, to efficiently manage inventories, and to coordinate decisions with suppliers and customers.24

Indonesia offers an example of the power of services reform. Duggan, Rahardja, and Varela (2013) examined the extent to which policy restrictions on FDI in the Indonesian service sector affected the performance of manufacturers over the period 1997–2010. They used firm-level data on manufacturers’ TFP and the OECD’s FDI Regulatory Restrictiveness Index, combined with data from Indonesia’s input-output...
tables regarding the intensity with which manufacturing sectors use services inputs. Controlling for firm-level fixed effects and other relevant policy indicators, they find, first, that relaxation of policies on FDI in the service sector (figure 2.17, panel a) was associated with improvements in service sector performance.

Second, they estimate that this relaxation in service sector FDI policies accounted for 8 percent of the observed increase in manufacturers’ TFP over the period (figure 2.17, panel b). The TFP gains accrued disproportionately to firms that were relatively more productive, and gains were related to the relaxation of restrictions in both the transport sector and electricity, gas, and water sector. TFP gains were associated, in particular, with the relaxation of foreign equity limits, screening, and prior approval requirements, but less so with discriminatory regulations that prevent multinationals from hiring key personnel abroad.

The development of the domestic services sector and access to imported services inputs are likely to influence comparative advantage in manufacturing trade even more in the future and reinforce the challenge that much of developing East Asia faces. Emerging technologies such as robotics, 3-D printing, and digitization through the internet of things (IoT) imply that the role of services in the manufacturing process is expanding (the so-called “servicification” of manufacturing) (Hallward-Driemeier and Nayyar 2017). An increasing share of goods trade now includes trade in embodied services. For instance, the advent of 3-D printing means a shift from the need to transport manufactured products between production facilities and consumers toward more trade in services—data flows—as part of the manufacturing process.

Weak complementarities to innovation investments

Investments in innovation do not automatically imply high rates of return in the form of higher productivity. This “Innovation Paradox” arises from the need for a range of factors that complement innovation investments and make them effective.25 In particular, there are three key determinants of innovation performance that complement...
investment in innovation, as measured for instance by R&D spending:

- **Complementary factors**, such as conditions for accumulation of knowledge and other forms of capital, which enhance the impact of innovation investments
- **Firms’ capabilities to innovate**, which can also be thought of as complementary factors at the firm level and include the firms’ management capabilities and production systems as well as their incentives to undertake innovations
- **Government capabilities to formulate and implement innovation policy**, such as the dimensions summarized in the construct of the Expanded National Innovation System (NIS) (figure 2.18).

The central implication of the Expanded NIS approach is that if innovation is to contribute to raising firm-level productivity growth, including in developing East Asia, countries will need to address multiple constraints. These priorities are likely to differ across countries within the region and will need to be addressed in a phased manner depending on which ones are binding.

To examine where countries in developing East Asia stand on the various determinants of innovation performance as embodied in the Expanded NIS approach, they are benchmarked on the Global Innovation Index (GII) and its various subcomponents (box 2.2). The GII rates the performance of countries by classifying factors that enable innovation under five pillars: institutions; human capital and research; infrastructure; market sophistication; and business sophistication.

These pillars of the GII correspond (although not exactly) to the various elements of the Expanded NIS. The supply and demand dimensions of innovation as well as the markets where knowledge accumulation takes place (highlighted in figure 2.18) are captured across the innovation-enabling pillars displayed in table 2.4. For instance, the set of external factors that influence the firm’s incentives to innovate (as highlighted in figure 2.18, the macro context, the competitive structure, and the trade regime) are captured by the “market sophistication” pillar. The same is true of the supply of human capital highlighted as one of the supply-side factors in figure 2.18, which is captured by the “human capital” pillar.

**FIGURE 2.18 Expanded National Innovation System**


Note: NIS = National Innovation System.
The Global Innovation Index (GII) dataset captures overall innovation capacity through a mix of indicators encompassing both innovation-enabling factors (“inputs”) as well as innovation outputs. It has a multilevel structure with two subindexes (one each for inputs and outputs) and seven pillars, which are then divided into three subpillars, each of which is composed of individual indicators of different types (composite indicators, survey questions, and hard data indicators), totaling 81 indicators. Scores (of index, subindex, pillars, and subpillars) are normalized in the 0–100 range. Figure B2.2.1 below displays the indicator schemata. Despite its drawbacks—particularly the lack of comparability over time and the “black box” nature (like other such indexes) of several of its components—this database provides a single source of information that allows the comparison of performance of national innovation systems across economies in a given year.

An analysis of the GII across all countries highlights several points. First, among the factors that enable innovation (the related subcomponents of the GII), human capital and research and business sophistication are the most significant in explaining differences in innovation performance across countries. The former accounts for about a quarter of the variation and the latter for about a fifth. In this sense, the ability of firms to absorb innovations—including in relation to their managerial capabilities—appears important in explaining performance.

Second, innovation performance is also related more generally to factors that affect firm performance and the accumulation of all capital (beyond knowledge). The subcomponents of the GII that cover institutions, infrastructure, and market sophistication collectively account for over a third of the variation across countries. This confirms the point in Cirera and Maloney (2017) that complementary factors that matter for innovation performance include those that pertain to the business environment.

**FIGURE B2.2.1 Global Innovation Index framework, 2017**


Note: ICTs = information and communication technologies.
Based on the GII and its disaggregation, several points emerge on where countries in developing East Asia stand on the various factors that enable innovation. Of the seven developing East Asian countries included in the GII, all except Malaysia are lower than the corresponding benchmarks (defined as the level for the median country covered in the GII and the predicted level according to per capita GDP) on at least one of the pillars (table 2.4). Cambodia, Indonesia, and Thailand stand out in falling short on all but one of the pillars. Looking across pillars, most of the seven countries underperform on institutions (all expect Malaysia), and to a lesser extent on human capital and business sophistication.

Unbundling each of these pillars as defined in the GII shows where the shortfalls are most pronounced for each country that is lower than the benchmark (table 2.5). The GII rankings do not include three of the developing East Asia countries covered in this study: Lao PDR, Mongolia, and Myanmar.

### TABLE 2.4 Benchmarking developing East Asia on the factors that enable innovation

<table>
<thead>
<tr>
<th>Country</th>
<th>Institutions</th>
<th>Human capital</th>
<th>Infrastructure</th>
<th>Market sophistication</th>
<th>Business sophistication</th>
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</table>

Source: Global Innovation Index (GII) and World Development Indicators 2017 datasets as elaborated in Iootty 2018.

Note: A value of 1 (red shading) indicates a GII pillar where the country falls both (a) below the value of the GII median country and (b) below the level predicted by the country’s gross domestic product (GDP) per capita. A value of 0 (green shading) indicates a pillar where the country value equals or exceeds (a) the GII median country value, (b) the level predicted by the country’s GDP per capita, or (c) both. The value of the median country (for each pillar) is calculated across the 127 countries covered by the GII. For definitions of each pillar, see the GII website: https://www.globalinnovationindex.org/. The GII rankings do not include three of the developing East Asia countries covered in this study: Lao PDR, Mongolia, and Myanmar.

### TABLE 2.5 Unbundling the institutional pillar of the GII as an enabler of innovation in developing East Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>Political environment</th>
<th>Regulatory environment</th>
<th>Business environment</th>
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</thead>
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<td>1</td>
</tr>
<tr>
<td>China</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Indonesia</td>
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</tr>
<tr>
<td>Malaysia</td>
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<td>Thailand</td>
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<tr>
<td>Vietnam</td>
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</tr>
</tbody>
</table>

Source: Global Innovation Index (GII) and World Development Indicators 2017 datasets as elaborated in Iootty 2018.

Note: A value of 1 (red shading) indicates a GII pillar where the country falls both (a) below the value of the GII median country and (b) below the level predicted by the country’s gross domestic product (GDP) per capita. A value of 0 (green shading) indicates a pillar where the country value equals or exceeds (a) the GII median country value, (b) the level predicted by the country’s GDP per capita, or (c) both. The value of the median country (for each pillar) is calculated across the 127 countries covered by the GII. For definitions of each pillar, see the GII website: https://www.globalinnovationindex.org/. The GII rankings do not include three of the developing East Asia countries covered in this study: Lao PDR, Mongolia, and Myanmar.
A final point that emerges from a disaggregation of these enabling factors for innovation is on the market sophistication pillar of the GII. Although overall this is not an area of weakness, the subcomponent of investment support, which includes the ease of protecting minority investors and venture capital, poses a challenge in many developing East Asian countries.

As stressed in Cirera and Maloney (2017), managerial capabilities are particularly

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**TABLE 2.6** Unbundling the human capital pillar of the GII as an enabler of innovation in developing East Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>Education</th>
<th>Tertiary education</th>
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<td>China</td>
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</table>

Source: Global Innovation Index (GII) and World Development Indicators 2017 datasets as elaborated in Iootty, 2018.

**Note:** A value of 1 (red shading) indicates a GII pillar where the country falls both (a) below the value of the GII median country and (b) below the level predicted by the country’s gross domestic product (GDP) per capita. A value of 0 (green shading) indicates a pillar where the country value equals or exceeds (a) the GII median country value, (b) the level predicted by the country’s GDP per capita, or (c) both. The value of the median country (for each pillar) is calculated across the 127 countries covered by the GII. For definitions of each pillar, see the GII website https://www.globalinnovationindex.org/. The GII rankings do not include three of the developing East Asia countries covered in this study: Lao PDR, Mongolia, and Myanmar.

**TABLE 2.7** Unbundling the business sophistication pillar of the GII as an enabler of innovation in developing East Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>Knowledge workers</th>
<th>Innovation linkages</th>
<th>Knowledge absorption</th>
</tr>
</thead>
<tbody>
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<td>Cambodia</td>
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<td>1</td>
</tr>
<tr>
<td>China</td>
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<td>0</td>
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Source: Global Innovation Index (GII) and World Development Indicators 2017 datasets as elaborated in Iootty, 2018.

**Note:** A value of 1 (red shading) indicates a GII pillar where the country falls both (a) below the value of the GII median country and (b) below the level predicted by the country’s gross domestic product (GDP) per capita. A value of 0 (green shading) indicates a pillar where the country value equals or exceeds (a) the GII median country value, (b) the level predicted by the country’s GDP per capita, or (c) both. The value of the median country (for each pillar) is calculated across the 127 countries covered by the GII. For definitions of each pillar, see the GII website https://www.globalinnovationindex.org/. The GII rankings do not include three of the developing East Asia countries covered in this study: Lao PDR, Mongolia, and Myanmar.

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see chapter 4 for the institutional challenges to sustaining high growth in developing East Asia). For human capital, the shortfalls are largest for education, with all except China and Vietnam falling below their benchmarks (table 2.6). Finally, on business sophistication, the weak aspect appears to be “knowledge workers,” where five of the seven East Asian countries (all except China and the Philippines) are below their benchmarks (table 2.7).
important for the efficacy of innovation investments. Low managerial capabilities prevent firms from identifying productive opportunities, evaluating their feasibility, managing their risk, and allocating human resources. Although the GII does not include detailed information about managerial capabilities, the World Management Survey (WMS) does collect such data.\textsuperscript{26} The WMS is only available for two developing East Asian countries: China and Vietnam. But these data point to serious deficiencies in managerial practices in these countries. Relative to the United States, both countries have much lower average scores across manufacturing firms (figure 2.19). They also both have larger proportions of poorly run firms than the United States.\textsuperscript{27}

**Uneven access to finance**

As noted, domestic capital markets have grown in complexity and depth across much of developing East Asia, particularly since the Asian Financial Crisis. However, access to them, and to finance more generally, has continued to be restricted only to the largest firms. The firms that issue in these markets are much larger than those that do not issue (Abraham, Cortina, and Schmukler 2018). For equity markets, the median issuing firm has assets about three times that of the median nonissuer. For bond markets, the gap is even larger, with the median issuer about seven times larger in terms of assets than the median nonissuer. Thus, small and medium enterprises (SMEs) still cannot take full advantage of the deepening of capital markets.

Because SMEs remain important contributors to employment and output in most of these economies, finding ways of fostering their productivity growth remains important. For instance, in economies at the lower end of the middle-income spectrum such as Cambodia, enterprises that employ fewer than 100 persons account for almost 60 percent of total sales and almost 75 percent of total employment in the industrial and service sectors. Even in economies that are higher on the middle-income scale, these shares are significant. In Indonesia, almost 75 percent of total sales and about 60 percent of total employment are accounted for by enterprises with fewer than 100 employees. These shares in the Philippines are about 66 percent and
SMEs in developing East Asia, as in other parts of the developing world, are more likely than large firms to cite access to finance as among the most significant constraints they face to their operations (Abraham, Cortina, and Schmukler 2018). Enterprise Survey data show, for instance, that among medium-size firms (those with 20–99 employees), almost 37 percent, respectively, for total sales and employment. SMEs in developing East Asia, as in other parts of the developing world, are more likely than large firms to cite access to finance as among the most significant constraints they face to their operations (Abraham, Cortina, and Schmukler 2018). Enterprise Survey data show, for instance, that among medium-size firms (those with 20–99 employees), almost 25 percent in Indonesia and about 14 percent in Vietnam highlight access to finance as a major constraint, compared with 18 percent and 9 percent of large firms in Indonesia and Vietnam, respectively.

For this reason, enhancing access of SMEs to finance remains important as a way of spurring productivity growth in much of developing East Asia. Nevertheless, one of the main approaches that policy makers in East Asia have taken to improving access of SMEs to finance, by attempting to broaden their access to capital markets, appears not to have been very effective. Specifically, several East Asian economies, developing and advanced, have set up SME capital markets, and in some cases, their scope has become large relative to those in other regions. However, the experience of China; Hong Kong SAR, China; and Taiwan, China—which have the largest of these markets in East Asia—suggests that despite their focus on SMEs, they still tend to serve larger firms (Abraham, Cortina, and Schmukler 2018). For instance, in the two largest SME markets in China—the SME Board and ChiNext—the median issuing firm employs 1,499 and 673 persons, respectively, which makes them much larger than a medium-size enterprise.

Similarly, the median issuing firm in these markets has total assets of $236 million and $124 million, respectively. Nevertheless, despite capital markets in the region continuing to serve larger firms, there is evidence that the deepening of capital markets in many economies has helped connect smaller firms to capital markets. This trend is particularly noticeable in comparing the period before the Asian Financial Crisis to the period after the Global Financial Crisis both in equity and bond markets. The size of the median firm issuing in these markets has fallen substantially between these two periods (figure 2.20). It is also striking that the median firm issuing in domestic bond markets is much smaller than its counterpart issuing on international markets (figure 2.21).
Conclusion

This chapter has summarized challenges in three areas—trade, innovation, and finance—that countries in developing East Asia face as they seek to sustain productivity growth in their efforts to make the transition to high-income status. In each of these areas, changes in the external environment require that the region’s countries reexamine their current policy choices to spur productivity growth—and, with it, their prospects for sustained development.

Notes

1. “Productivity isn’t everything, but, in the long run, it is almost everything. A country’s ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker” (Krugman 1994, 11).
2. For some of the challenges involved in measuring TFP, see Cusolito and Maloney (2018).
3. The analysis of productivity trends pertains only to China and the five large Association of Southeast Asian Nations (ASEAN) economies (Indonesia, Malaysia, the Philippines, Thailand, and Vietnam) because data limitations do not allow this for the other economies.
4. As with the productivity slowdown in other parts of the world since the Global Financial Crisis, there are a number of hypotheses as to the precise reasons for this slowdown in developing East Asia, including declining investment, slowing trade growth, and the fading effects of the information and communication technology (ICT) revolution.
5. This finding likely reflects the fact that these economies (except Vietnam) accumulated human capital before the periods analyzed here.
6. The growth in agricultural productivity early in their development process was also a key factor underpinning rapid poverty reduction in these economies, as noted in chapter 3.
7. However, as noted in Rogerson (2017), this relationship should not be interpreted as implying causation that goes from structural transformation to productivity change.
8. BRICS refers collectively to five major emerging economies: Brazil, Russian Federation, India, China, and South Africa.
9. For instance, among a sample of 11 Sub-Saharan African countries, the mining sector had labor productivity levels about 17 times higher than in agriculture but was also highly capital-intensive (McMillan and Rodrik 2011).
10. Employment data are, respectively, from the General Statistics Office, Vietnam, and the Mongolian Statistical Information Service.
11. For a summary of the cross-country evidence on this point, see Hallward-Driemeier and Nayyar (2017), chapter 1.
12. The 13 economies were those that had grown at an average annual rate of 7 percent for at least a 25-year period between 1950 and 2005 so that they at least doubled in size roughly every decade. Four of the nine East Asian economies in this group—China, Indonesia, Malaysia, and Thailand—are also part of developing East Asia as characterized in this study.
13. For a brief overview of this literature, see IMF (October 2016).
14. Data on value added, output, and trade are from Organisation for Economic Co-operation and Development (OECD) Inter-Country Input-Output (ICIO) tables (2016 edition), which offer better low- and middle-income country coverage than the University of Groningen’s World Input-Output Database (WIOD) 2013 release. Data on capital and employment are from the OECD Structural Analysis (STAN) database (downloaded in November 2017); WIOD; and the United Nations Industrial Development Organization (UNIDO) Industrial Statistics (INDSTAT2) 2017 ISIC Revision 3 database. The resulting dataset covers 55 countries and 12 sectors for the period 1995 through 2011. It includes the following developing East Asian countries: China, Indonesia, Malaysia, the Philippines, and Vietnam. Estimations are restricted to manufacturing sectors (excluding manufacturing of coke, refined petroleum, and nuclear fuel).
15. This analysis reinforces the findings of Constantinescu, Mattoo, and Ruta (2017). Because the sample used here is different, the coefficients are different in magnitude, however. In particular, the coefficient of GVC-related trade is smaller than the one of non-GVC-related trade.
16. See Myrvoda, Nabar, and Rhee (2016) for cross-country evidence that greater resilience—“staying in positive per capita income growth states and minimizing negative growth states”—is associated with higher average per capita income growth over the long term.
17. The countries covered are Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, and Vietnam. The survey year analyzed for each country is either 2015 or 2016, depending on data availability.
18. The median economy is defined as the one with the median GDP among the group of developing East Asian economies.
19. For a discussion of these factors and their relative importance, see Constantinescu, Mattoo, and Ruta (2018a).
20. This is the current number of free trade agreements (FTAs) and economic integration agreements (EIAs) notified to the WTO.
21. As discussed in de Nicola, Kehayova, and Nguyen (2018), table 2.3 presents two different measures of the potential productivity gains that can be achieved from reallocation. First, consistent with Hsieh and Klenow (2009), the “without correction” entries provide the estimates of potential gains if distortions (taxes) to revenue and labor are removed and factors of production (labor, capital, and intermediate inputs) are reallocated toward their most productive uses. The second set of entries (“with common correction”) accounts for the presence of measurement error. Specifically, it is assumed that the bias from measurement error is common across the time periods considered. Accounting for measurement error significantly reduces the magnitude of the potential gains from reallocation; these changes are as low as 15 percentage points in Malaysia and as high as 72 percentage points in Indonesia. Yet, even the more conservative estimates indicate that the potential increase in productivity from reallocations could be substantial if distortions are removed.
22. See Rodrik (2016) for a characterization of the phenomenon and boxes 2.1 and 2.2 in Hallward-Driemeier and Nayyar (2017) on the lack of consensus around whether it is premature.
23. In addition to strengthening services sector policies, strengthening state effectiveness through the development of more transparent, rules-based, and accountable systems represents a critical challenge for developing East Asian countries as they seek to move from middle- to high-income status. For a more detailed discussion of these issues, see chapter 4.
24. Several studies show that access to low-cost, high-quality (domestic or foreign) producer services can promote productivity and economic growth (Hoekman and Mattoo 2008). Arnold and others (2016) collected detailed information on the pace of reform across Indian services sectors,
with a focus on entry and operational restrictions. The results suggest that pro-
competitive reforms in banking, transport, insurance, and telecommunications boosted
the productivity of both foreign and locally
owned manufacturing firms. Using firm-level
data for the Czech Republic for 1998–2003,
Arnold, Javorcik, and Mattoo (2011) find a
positive effect on the productivity of domestic
firms in downstream manufacturing as a
result of services sector reforms leading to
greater FDI. Using the annual manufacturing
survey of Chilean firms, Fernandes and
Paunov (2012) find a positive effect of
substantial FDI inflows in producer services
sectors on the TFP of Chilean manufacturing
firms. Their findings also suggest that services
FDI fosters innovation in manufacturing and
offers opportunities for laggard firms to
catch up with industry leaders. These benefits
arise not just from foreign investment but
also from cross-border trade in services. For
example, Amiti and Wei (2009) find that
services offshoring by high-income countries
tends to raise their manufacturing sectors’
productivity.

25. See Cirera and Maloney (2017) for an
exposition of this paradox and its applicability
to understanding the determinants and returns
to innovation in low- and middle-income
countries.

26. For details of the methodology and the
dataset, see the World Management Survey
website: https://worldmanagementsurvey.
.org/.

27. See Iootty (2018) for details, especially
on the point about poorly run firms. As
discussed there, WMS data are also available
for Malaysia but are not comparable on all
counts. Nevertheless, average management
practices in Malaysia are also found to be well
below those of the United States and Japan.

28. Sales and employment data are compiled from
national census and survey data.

29. See Abraham, Cortina, and Schmukler (2018)
for a description of SME capital markets and a
comparison of those in East Asia with those
in other regions.

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Fostering Inclusive Growth

Introduction

An important feature of the East Asian development model is that the benefits of growth have been broadly shared. Rapid growth has been accompanied not only by historic rates of poverty reduction but also by broad gains across the welfare distribution. In 2002, more than half of the region’s population was living in extreme or moderate poverty, but by 2015, nearly two-thirds of the region’s population was classified either as economically secure or middle class (as illustrated in chapter 1, figure 1.10). As countries in developing East Asia navigate the transition from middle-income to high-income levels, ensuring that growth continues to be shared will be an increasing challenge.

Although extreme poverty is no longer the driving concern in most countries, tackling the poverty that remains will be harder, because it tends to be concentrated among specific population groups and in specific regions (see figure 3.1 for Vietnam and map 3.1 for the Philippines). And despite countries’ successes in reducing poverty, roughly one-quarter of the region’s population remains economically vulnerable, facing significant risks of falling back into poverty (World Bank 2018f). Moreover, inequalities in income and in wealth in many parts of the region are rising or perceived to be growing, which is raising concerns among citizens that a rising tide may no longer lift all boats.

Many of the global and regional changes that are raising challenges to sustaining productivity growth in developing East Asia, discussed in chapter 2, also may be threatening the continued viability of the region’s traditional “growth with equity” model.

FIGURE 3.1 Poverty rates in Vietnam, by urban, rural, and ethnicity, 2016

Note: Poverty measured using the General Statistics Office of Vietnam (GSO)–World Bank poverty line, set for 2016 at a monthly consumption level of D 969,167 per person, equivalent to 2011 purchasing power parity (PPP) US$3.34 per person per day.

a. “Kinh or Hoa ethnicities” refer to people who are either Kinh, the single largest ethnic group in Vietnam (comprising roughly 85 percent of the population), or Hoa, Vietnamese of Chinese ethnicity. “Ethnic minorities” refers to 52 other officially recognized ethnic groups in Vietnam.
Changing trade patterns, along with slowing growth in global trade and rising protectionist sentiments among some of the region’s key trading partners, all raise questions about whether labor-intensive manufacturing for export can still provide the same engine for economic opportunity for the region’s low-skilled workers.

At the same time, ongoing development is changing the nature and structure of production in many countries as firms transition from the production of less-sophisticated to more-sophisticated goods, requiring different skill sets. And, at least among “second wave” countries, within-sector productivity improvements are likely to take precedence over structural transformation, which in an earlier period effectively absorbed low-skilled labor from rural, agricultural areas into urban manufacturing and services. Finally, changing technologies—whether digital technologies (Industry 3.0) or advanced robotics (Industry 4.0)—are also transforming the nature and structure of labor demand in many countries, and potentially doing so at an increasingly rapid pace.

Against this background, this chapter examines the challenges and opportunities that countries in developing East Asia face in ensuring that growth is inclusive as they transition from middle-income to high-income status. Because rising labor incomes are key not only to escaping poverty but also to the long-term well-being of individuals and their families, the chapter focuses largely on challenges and opportunities in the labor market.

The chapter begins with a brief review of the factors that historically contributed to growth with equity in the region, and in particular, the factors that generated economic opportunity for lower-skilled workers. It then examines how changing trade, technology, and the development process itself are creating challenges to the traditional “growth with equity” model and, specifically, how demand for workers’ skills is changing over time. Finally, the chapter examines how prepared developing East Asian countries are to confront these challenges and to ensure that their citizens have the tools to navigate and succeed in a changing economic environment.

**Early drivers of growth with equity**

Recognizing that labor was their most abundant asset in the early stages of development, policy makers in developing East Asia promoted labor-intensive growth through two main channels: promoting agricultural development and pursuing trade openness.

At low income levels, developing East Asian countries were predominantly rural, and their economic structures were heavily agricultural.
So, ensuring agricultural development represented a critical pathway to achieve both economic growth and poverty reduction. Because large swaths of their populations were dependent on agriculture, measures to build rural infrastructure, ensure the population’s basic literacy and numeracy, support adoption and use of high-yielding rice varieties, and promote agro-processing all contributed to growth, development, and improved living standards for the rural poor. Rising farm incomes, in turn, increased local demand for goods and services, facilitated development of rural nonfarm enterprises, and spurred employment growth in rural areas (World Bank 2013).5

Policy makers’ focus on export-oriented manufacturing has similarly delivered the dual benefits of higher incomes and more jobs for low-skilled labor. Coupled with rising productivity in agriculture, export orientation helped propel countries’ structural transformation, creating regular and relatively well-paying employment for low-skilled workers who moved out of rural areas and into urban-based manufacturing. As with agricultural development, export-oriented manufacturing has not only provided factory jobs to low-skilled workers but has also led to significant job spillovers—through backward and forward production links and through positive demand effects in local economies. Indeed, indirect job creation due to export-oriented manufacturing has often been substantial (figure 3.2).

Evidence on the impacts of the 2001 U.S.–Vietnam Bilateral Trade Agreement reinforces the importance of exports’ effects on both direct and indirect job creation. To begin with, tariff cuts resulted in sharp increases in manufacturing employment. The increase in manufacturing jobs served to draw labor out of agriculture, supporting Vietnam’s structural transformation (Hoang and Nguyen 2018). This movement of labor did not translate into declines in agricultural income because it went along with increases in agricultural productivity. There were also strong job spillover effects via increased employment in several service sectors, including in local commerce and supporting services to manufacturing.

Although much attention has been placed on the links between export-oriented manufacturing and employment for low-skilled workers, the exact labor-demand effects depend on a number of country-specific factors, including the composition of the country’s manufactures for export and its position in regional and global value chains. Vietnam’s experience with trade from 2002 to 2012,

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Although much attention has been placed on the links between export-oriented manufacturing and employment for low-skilled workers, the exact labor-demand effects depend on a number of country-specific factors, including the composition of the country’s manufactures for export and its position in regional and global value chains. Vietnam’s experience with trade from 2002 to 2012,
for example, was that increased exports raised demand for both low- and high-skilled labor, although demand for low-skilled labor increased more (Poole and others 2017; Poole and Santos-Paulino 2017). And although export growth raised labor demand for both female and male workers, the effects were larger among female workers (Poole and Santos-Paulino 2017).

Analysis of trade and technology adoption in Indonesia commissioned for this report finds that the impact of exports on employment differed considerably between two distinct subperiods, driven by the nature and structure of exports during each period. From 2005 to 2010, a period when Indonesia experienced a commodity export boom, export growth did not increase aggregate employment, although rising exports did raise employment among better-educated workers (those with at least secondary education) and among female workers (Darko and Viollaz 2018). From 2011 to 2015, however, following the end of the commodity boom—and an increase in the relative importance of manufactured exports—greater exports were associated with higher employment more broadly. Additional exports raised demand for those with both low and high education levels as well as for both male and female workers.

Emerging challenges to ensuring shared growth

As the countries of developing East Asia move through middle-income and toward the high-income ranks, changes in domestic patterns of production, coupled with global changes in trade and technology, are likely to make it more difficult to ensure that growth is inclusive. Strategies focused on agricultural sector growth and rural development will continue to be important to varying degrees in “third wave” countries such as Cambodia, the Lao People’s Democratic Republic, Myanmar, and Vietnam, where upward of 40 percent of the labor force still worked in agriculture in 2015. Nevertheless, as countries continue to grow, their economies become increasingly sophisticated and their populations increasingly urban, low-skilled workers may find it increasingly difficult to find their niche. This section examines emerging challenges to inclusive growth arising from changing patterns of production and trade as well as from rapid technological change.

Changing patterns of production and trade

Countries in developing East Asia have typically used low-skill, labor-intensive manufacturing as an entry point into export markets, especially through the production of such products as garments, textiles, leather goods, and furniture, where the low-skilled labor share is particularly high. Changes in patterns of export-oriented manufacturing, at both the global and country levels, are reducing relative demand for low-skilled labor, however.

At the global level, nearly all manufacturing subsectors have become less intensive in their use of low-skilled labor in production since the early 1990s (figure 3.3). This is true even for manufacturing subsectors where total employment has been rising—for example, in food, beverages, and tobacco products as well as in computers, electronics, and optical equipment (Hallward-Driemeier and Nayyar 2017). Moreover, as the region’s countries have developed, their manufacturing has evolved in ways that have increased relative demand for more-skilled labor. In Indonesia, Malaysia, and the Philippines, for example, the composition of manufacturing has been shifting away from production of low-skill, labor-intensive goods to production of more skill-intensive goods. This change can be seen in declining shares of their output related to textiles and apparel as well as food and beverages (especially in the Philippines) alongside rising shares related to computers and electronics as well as transportation equipment since the mid-1990s (figure 3.4). Similar patterns are observed in the Republic of Korea, which transitioned from middle-income to high-income status during the period.

Based on countries’ export baskets, since the mid-1990s, Thailand has moved
to higher-value production, developing a revealed comparative advantage (RCA) in medium-skill industries (for example, transportation equipment, electrical equipment, and other machinery and equipment) while losing its RCA in low-skill, labor-intensive manufacturing (World Bank 2018c). 

China has also moved into higher-skill, higher-value-added sectors over the period (for example, computers, electronics, optical instruments, and pharmaceutical products)—although, unlike Thailand, it has maintained its RCA in low-skill, labor-intensive sectors (World Bank 2018c). Indeed, China maintained or acquired RCA across a broad swath of manufacturing subsectors over the period, emerging by 2011 as one of the top 10 exporters in four key manufacturing subsectors: low-skill, labor-intensive tradables; commodity-based processing; medium-skill manufactures; and high-skill manufactures (Hallward-Driemeier and Nayyar 2017).

Although the shift from the production of simpler to more sophisticated, more skills-intensive goods is expected as countries grow...
and develop, it also means it will be more challenging for workers to participate successfully in this important segment of the labor market.

**Changing technologies**

Rapid technological change will also contribute to the challenges of ensuring that growth is inclusive. Indeed, the prospects for rapid industrial automation—whether through the adoption of industrial robots, 3-D printing, or the internet of things (Industry 4.0)—have raised concerns that low-skilled workers may find themselves replaced by machines as East Asian countries continue to grow and develop.

China’s efforts to rapidly expand its stock of industrial robots (chapter 1) have contributed to such concerns because of the potential implications of industrial automation both for jobs within China and for offshoring of manufacturing elsewhere in the region. At its 19th National Congress of the Communist Party in October 2017, China reiterated its intention to increase the domestic content of its exports (Xi 2017). Although the extent and pace of this shift is uncertain, if such “reshoring” by China serves to shrink regional and global value chains, it could put a drag on the creation of new manufacturing jobs elsewhere in the region.

Rising concerns about the impact of automation on jobs has spawned a number of studies attempting to quantify the risk to people’s jobs from automation, including in developing East Asia. Adopting different methodologies and defining the risk of automation in different ways, these studies have produced an extraordinarily wide range of estimates of the employment risks associated with automation. For China alone, estimates of the extent to which jobs may be automated over the next 10–20 years range from as low as 7 percent to as high as 77 percent (table 3.1).

The considerable differences in estimates shown in table 3.1 reflect several factors. Some estimates focus purely on the technological feasibility of automation, while others account for a broader set of economic, regulatory, and institutional factors that could affect the extent and pace of industrial automation. There is general agreement that automation will happen more quickly in wealthy, high-capacity countries than in poorer,

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Sources: Hallward-Driemeier and Nayyar 2017; Manyika, Chui, and others 2017; Manyika, Lund, and others 2017; World Bank 2016.

Note: — = not available. Studies shown adopt varying methodologies and definitions in estimating job automation. Although the time frame for automation impacts are not modeled explicitly in all the studies, the discussions generally focus on a 10- to 20-year time horizon.

a. Share of current jobs at high risk of automation, based on the “automatability” of their constituent tasks, where “high risk” is defined as a greater than 70 percent probability of a job being automated based on task automatability.

b. Percentage of current work activities displaced by automation, 2016–30, based on midpoint adoption scenario.

c. Percentage of time spent on activities with technical potential for automation by adapting currently demonstrated technology.

d. Upper-bound estimates reflect unadjusted probabilities of automation for occupation, based on Frey and Osborne (2013); lower-bound estimates are adjusted to account for the slower pace of technology adoption in lower-income countries.

e. Yunnan Province, China.
low-capacity environments. The estimation approach also matters. For example, World Development Report 2016: Digital Dividends begins by estimating the technical feasibility of automation of different occupations before adjusting for time lags associated with technology adoption in low- and middle-income countries (World Bank 2016). The estimates that take into account the pace of technology adoption in low- and middle-income economies are considerably lower than those that focus only on technical feasibility. This can be seen by comparing the low and high estimates in the rightmost column of table 3.1, which reflect the time-lag adjusted and unadjusted estimates, respectively.

Similar differences can be seen comparing two sets of estimates from the McKinsey Global Institute (the center columns of table 3.1). The higher of the McKinsey estimates reflects technical potential for automation (Manyika, Chui, and others 2017), whereas the lower of the estimates incorporates broader implementation-related criteria (Manyika, Lund, and others 2017). Other factors also affect one's assessment of the risks of job displacement. For example, building on Arntz, Gregory, and Zierahn (2016), Hallward-Driemeier and Nayyar (2017) incorporate more detailed information on the task structure of occupations as well as on employment type. As the left column of table 3.1 shows, estimates that focus on automation of tasks within occupations result in substantially lower estimates than those that focus on automation of occupations as a whole. In short, consistent with the broad range of available estimates, there is still considerable uncertainty about how extensively—and how quickly—industrial automation may displace workers in developing East Asia.

Job displacement is only one of several possible labor market effects of automation, however. While some jobs may disappear, many jobs will evolve in ways that allow workers to adapt and undertake tasks that are complementary to technology. New jobs will be created as well. How these different forces will net out is uncertain, however, and evidence on the effects of technology on aggregate employment is mixed. A recent study of robotization in the United States found significant and sizable negative effects of robot use on employment (Acemoglu and Restrepo 2017). Other studies of technology adoption and robotization in Europe and the United States, however, find no significant effects on overall employment, although there is evidence of declines in employment among low- to middle-skilled workers (Autor, Dorn, and Hanson 2015; Graetz and Michaels 2018). In contrast, evidence from middle-income Latin America indicates that net employment effects can be positive, even for low-skilled workers, when technology raises firm productivity and higher firm productivity leads to expanded firm output (Dutz, Almeida, and Packard 2018). Available evidence from developing East Asia suggests that technology can be “labor saving” in some production contexts. However, where adverse employment effects are found, the magnitudes do not appear to be large (Darko and Viollaz 2018; Poole and Santos-Paulino 2017).

What is increasingly clear, however, is that new technologies—whether digital technologies (Industry 3.0) or advanced robotics (Industry 4.0)—are changing the structure of demand for workers’ skills. And, with some noteworthy exceptions, new technologies appear to increase the demand for workers with more advanced skills that are not easily automated.

Although much of the empirical evidence in this regard still comes from outside the region, the effects of technology adoption on the demand for skills are already starting to be observed in developing East Asia. In Vietnam, for example, increases in computers between 2002 and 2012 were associated with rising demand for nonroutine manual skills (Poole and Santos-Paulino 2017). And in Indonesia, increases in computers during the commodity boom period (2005–10) were also associated with higher demand for nonroutine skills, although in this case, demand increased for nonroutine analytical and interpersonal skills (Darko and Viollaz 2018). Interestingly, technology adoption between 2011 and 2015, actually reduced the demand for nonroutine
cognitive skills in Indonesia. This finding is consistent with the same study’s finding that exports also affected employment patterns differently between 2005–10 and 2011–15. Indeed, differences in sectoral patterns of growth, technologies adopted, and the points in production processes where firms used new technologies all help explain these differences.

Although the relationship between technology and the demand for workers’ skills is complex—and will continue to evolve as technologies advance—the weight of the global evidence indicates that technological change is increasing demand for more-advanced skills (box 3.1).

Although technological change is raising demand for more-advanced skills, technology also holds significant power to enable inclusive growth (World Bank 2016, 2019). Cross-country evidence highlights multiple channels through which digital technologies, if accessible and affordable, can contribute to growth that is broadly shared. Digital technologies can help reduce the cost of accessing markets, particularly for smaller firms and entrepreneurs living in more remote areas of a country. They can also lower the cost of getting information about job opportunities, especially outside one’s immediate locality (Packard and Montenegro 2017).

Digital technologies improve market access because online trading platforms reduce transaction costs, helping to level the playing field between smaller and larger firms and across geographic distances. Transactions over the internet benefit smaller firms, which also tend to hire relatively low-skilled workers, by enabling the firms to reach new consumers and reap productivity gains. By lowering the costs of obtaining information about job openings beyond that typically available through one’s personal networks or countries’ public employment services, digital technologies can help increase labor mobility.

**BOX 3.1 Global evidence on technology and jobs: Increasing demand for more-advanced skills**

Until recently, much of the evidence on the effects of technology adoption on labor market outcomes focused on the United States and other high-income countries. Although this literature recognizes the productivity gains associated with technology adoption, a central concern has been on how new technologies (whether information and communication technology [ICT] or robot-related automation) affect employment, especially among low- and middle-skilled workers.

One recent study uses data on robot adoption in 17 high-income countries between 1993 and 2007 to examine the economic impacts of automation (Graetz and Michaels 2018). The study finds no significant impact of robot adoption on overall employment levels. However, its estimates suggest that robotization in these countries was “skills-biased,” reducing the employment share of low-skilled workers.

Another study by Autor, Dorn, and Hanson (2015), focused specifically on the labor market impacts of trade and technology adoption in the United States between 1980 and 2007, finds that computerization reduced employment among middle-skilled workers involved in routine-task-intensive occupations (such as production jobs, clerical and administrative support, and sales occupations). Declines in routine employment were largely offset by increases in more abstract-task-intensive occupations (especially among younger, college-educated workers) on one hand, and in more manual-task-intensive occupations (particularly among older, less-educated workers) on the other. This “hollowing out” of middle-skilled jobs has come to be known in the literature as “job polarization.”

A recent study on the effects of robot use in local labor markets in the United States between 1990 and 2007 (Acemoglu and Restrepo 2017) finds sizable negative effects of greater robot use on both employment and wages as well as shifts in skills demands. One additional robot per 1,000 workers is found to reduce employment on the order of 3.0–5.6 jobs per robot and to reduce wages by around 0.25–0.50 percent. Employment effects are most pronounced

*box continues next page*
in manufacturing; in routine manual, blue collar, assembly and related occupations; among men; and among workers with less than college education. In contrast to Autor, Dorn, and Hanson (2015), Acemoglu and Restrepo (2017) find no offsetting employment gains among other occupational categories. The authors do find that the impact of robotization is distinct from that of other types of information technology (IT) capital, suggesting that the precise labor market effects depend on the type of technology adopted.

Research on developing and emerging economies has not provided strong evidence of job polarization to date (Das and Hilgenstock 2018; Maloney and Molina 2016). Nonetheless, a growing number of country studies find evidence that technology adoption raises relative demand for more-skilled workers. A recent study on Latin America brings together new evidence on ICT adoption in Argentina, Brazil, Chile, Colombia, and Mexico (Dutz, Almeida, and Packard 2018). The analysis generally reinforces the idea that technology adoption favors workers with higher skills. In contrast to the studies from the high-income economies, however, the evidence from Latin America paints a more positive picture of the effects of technology adoption on low-skilled employment. Investments in ICT raised firm productivity and enabled firms to expand their output, and this in turn led to net employment growth for low-skilled as well as high-skilled workers.

Not all studies find that technology adoption favors higher-skilled workers, however. In Chile, adoption of complex software induced shifts in employment away from skilled workers and toward administrative and unskilled production workers (Almeida, Fernandes, and Viollaz 2017). In contrast to more general investments in ICT (for example, computers, internet connectivity, and company websites), complex software served to substitute for workers carrying out higher-order tasks and, as such, increased demand for lower-skilled workers performing more routine and manual tasks. Similarly, in Indonesia between 2011 and 2015, increases in computers were associated with a relative decline in demand for nonroutine analytical and interpersonal tasks and skills (Darko and Viollaz 2018).

An important insight from these studies—consistent with the Acemoglu and Restrepo (2017) finding on nonrobotic IT capital—is that the precise effect of technology adoption on jobs and skills is, in part, a function of the nature of the technology being adopted and where firms are using it in their production processes.

Source: Mason, Kehayova, and Yang 2018.

**BOX 3.1 Global evidence on technology and jobs: Increasing demand for more-advanced skills (continued)**

and improve matches between workers’ skills and employers’ needs. Instances in which new technologies are supporting inclusive growth are already seen across the region, not just with respect to people’s livelihoods but also in better access to goods and services (box 3.2).

**The changing nature of work**

A constellation of factors—structural change, changes in export-oriented manufacturing and trade, and new technologies—is changing what it will take for people to be successful in the labor markets in developing East Asia. Specifically, demand is rising for more-advanced skills: higher-order cognitive skills, socioemotional skills, and higher-order technical skills (box 3.3). Although the specific nature and pace of these changes differ across countries, as countries develop, their labor markets are moving away from occupations intensive in manual tasks and toward those with more-cognitive tasks, including nonroutine analytical and interpersonal skills (figure 3.5; see also Hardy, Lewandowski, and Park 2018; Macdonald 2018).

Moreover, demand for more-advanced skills has generally been increasing over time. From 2000 to 2012, for example, the share of employment in occupations that were intensive in nonroutine cognitive
Digital technologies—if broadly available and affordable—hold significant potential to enable inclusive growth in developing East Asia. New technologies are reducing the costs of access to markets and information. They are improving access to goods in remote, difficult-to-reach areas. And they are helping governments identify poor and vulnerable populations and deliver services where needed. Rigorous impact evaluations of the impacts of technology on inclusive growth are still scarce. Nonetheless, promising initiatives can already be seen across the region, as the examples below illustrate.

**Strengthening herders’ and farmers’ livelihoods**

Mobile phones are enabling rural farmers and herders in Mongolia, whose livelihoods are crucially dependent on weather patterns, to access “timely and accurate localized weather forecasts as a means to reduce risk and improve planning of key livelihood activities” (Hijaba, Vernooy, and Jamba 2013). In the pilot phase of this project, communities reported improvements in pasture management and in social, health, and ecological indicators.

Smartphones offer opportunities that go well beyond weather information, including access to agricultural extension services. For example, the International Rice Research Institute (IRRI) of the Consultative Group on International Agricultural Research (CGIAR), under its Climate-Smart Agriculture Advisory Services, has developed Rice Crop Manager (RCM), a web-based smartphone application currently deployed in many parts of the Philippines and Vietnam. The RCM enables agricultural extension staff to ensure sustainable productivity gains for poor rice farmers through cost-effective crop management.

Private companies are also experimenting in this area. Unilever, in collaboration with Vodafone, has piloted a project with coconut sugar farmers in Indonesia “to enhance their livelihoods by helping implement best practices, increase access to markets and reduce transactional costs” while reaping the benefits of enhanced traceability of raw materials and greater security of future supply.

**Enabling small entrepreneurs**

Digital solutions are also helping small entrepreneurs improve their livelihoods and provide better services. Uber-like smartphone applications are proliferating in the region. PassApp, for example, is helping taxi drivers in Phnom Penh, Cambodia, earn higher incomes and provide more reliable services to their riders (World Bank 2018a). Other digital solutions are helping people address specific constraints (cultural or otherwise). For instance, the Sister Ojek app in Jakarta, Indonesia, is helping to connect female motorbike drivers with women and children riders, thereby helping to address a gender bias on traditional ridesharing apps reported by some female drivers (Karbalail 2018).

**Facilitating “last-mile” goods delivery**

Technology is also increasing access to goods for people living in remote areas. In China, where the share of e-commerce in total retail sales is the second highest in the world, significant disparities remain in access to e-commerce. So, the government has partnered with Alibaba to address the “last-mile” challenges of providing access to the Taobao e-commerce platform—increasingly used in richer coastal regions—to poorer inland areas (World Bank 2018c). In addition, the internet shopping site JD.com is experimenting with deliveries by drone to facilitate goods delivery to more isolated, difficult-to-reach locations, where delivery costs would otherwise be prohibitive (Bloomberg News 2018).

**Supporting more effective service delivery**

Digital technology is also enabling governments in the region to strengthen their “social information systems”—tools to collect information on beneficiaries, determine program eligibility, manage payments, and implement case management and grievance and redress systems. These digitized social registries are helping to strengthen countries’ abilities to identify those in need and to more reliably deliver support services.

Specifically, these social registries are helping to systematize information on program applicants, supporting the processes of intake, registration, and
determination of beneficiary eligibility, based on applicants’ socioeconomic data. They are generally designed as multiuse platforms to connect people to a range of public services, including social protection, health, pro bono legal services, and banking services. Digitized social registries are already operational in China (Dibao Registry), Indonesia (UDB), and the Philippines (Listahanan).

Sources: Bloomberg News 2018; Hijaba, Vernooy, and Jamba 2013; Karbalail 2018; World Bank 2018d, 2018g.


and socioemotional skills increased from 19 percent to 23 percent in low- and middle-income countries, while the share of occupations intensive in nonroutine cognitive and socioemotional skills in high-income countries grew from 34 percent to 41 percent (World Bank 2016). As countries in developing East Asia move from middle-income to high-income status, this process will only continue. And as technology continues to change, rising demand for advanced skills will likely only accelerate.

The changing nature of the task and skill content of jobs can be seen in data

**BOX 3.2 Digital technology: Its potential for promoting inclusive growth in developing East Asia (continued)**

**BOX 3.3 Skills for the new economy**

With economic development comes demand for a labor force with more-advanced skills. Not only does employment shift toward occupations that require higher skills levels, but even within jobs, tasks become more skills intensive. Although basic cognitive skills such as literacy and numeracy may be sufficient at lower income levels, several types of skills become increasingly important as countries move from middle income to high income: higher-order cognitive skills, socioemotional skills, and higher-order technical skills. These skill sets can be defined as follows:

- **Cognitive skills** include the use of logical, intuitive, and creative thinking as well as problem solving using acquired knowledge. Basic—or foundational—cognitive skills include literacy and numerical ability, whereas nonroutine, higher-order cognitive skills refer to the ability to understand complex ideas, learn from experience, adapt effectively in the workplace, analyze problems using logical processes, and overcome obstacles using critical thought.

- **Socioemotional skills** embody the various personality traits that are crucial to one’s performance and effectiveness in the workplace. Sometimes referred to as nonroutine interpersonal—or “soft”—skills, these encompass a broad range of malleable skills, behaviors, attitudes, and personality traits that enable people to navigate workplace and social situations. These include such attributes as motivation, perseverance, organization, and effort, as well as one’s ability to communicate and to work effectively with others.

- **Technical skills** reflect learned knowledge in particular domains. They are often discipline specific and are reflected in information and capabilities that are directly applicable to particular employment and occupational settings, such as a plumber’s ability to fix a water leak, a factory worker’s ability to operate or maintain a machine, or an office worker’s ability to use a computer. Increasingly, basic digital literacy may also be counted as a critical technical skill.

While the need for an increasingly skilled workforce has always accompanied development, rapid technological change is accelerating the rate at which workers will require higher-order skills to succeed in the labor market.

Sources: Mason, Kehayova, and Yang 2018; World Bank 2016.
FIGURE 3.5  Task-skill intensity of jobs in selected countries, by income level, 2010s

Source: Macdonald 2018.
Note: Analysis includes 92 countries using International Labour Organization (ILO) data for the most recent available year; Macdonald (2018) finds similar patterns in analyzing 44 countries using data from Integrated Public Use Microdata Series (IPUMS) International, Minnesota Population Center, University of Minnesota. Country income classifications reflect countries’ status in the year the data were collected. GNI = gross national income; LICs = low-income countries; LMICs = lower-middle-income countries; UMICs = upper-middle-income countries; HICs = high-income countries; PPP = purchasing power parity. “Other economies” refers to non-East Asian economies.

a. Tasks are categorized as “routine” or “nonroutine” based on how repetitive or structured they are, and as “manual-physical” or “cognitive” (including analytical and interpersonal) based on the type of work involved (see Autor, Levy, and Murnane 2003). More-routine tasks are more susceptible to automation. The task-skill intensity indexes are then created for the five task-skill categorizations using the Occupational Information Network (O*NET) dataset (https://www.onetcenter.org/database.html) and mapped to country-level occupational data. For technical details, see Macdonald (2018) and Mason, Kehayova, and Yang (2018).
from Indonesia, Malaysia, Mongolia, the Philippines, Thailand, and Vietnam showing how the task and skill intensity of occupations has evolved from the early 2000s to 2015 (figure 3.6). Patterns are largely consistent across countries. Tasks intensive in cognitive skills have tended to increase over time, whereas tasks intensive in manual tasks have tended to decline. These patterns reflect the combination of factors that have accompanied development: movement of labor out of agriculture and into manufacturing and services, shifts to higher-value-added manufacturing and services, and adoption of new technologies.

In Indonesia and Thailand, jobs intensive in cognitive tasks—and, in particular,

**FIGURE 3.6** Changes in the task-skill intensity of jobs in several developing East Asian countries, early 2000s to 2015

Source: Mason, Kehayova, and Yang 2018.

Note: Figure presents percentage changes in the task-skill intensity indexes for jobs between the early 2000s and 2015. The exact time horizon for each country reflects data availability in that country. Tasks are categorized as “routine” or “nonroutine” based on how repetitive or structured they are, and as “manual-physical” or “cognitive” (including interpersonal or analytical) based on the type of work involved. Task-skill intensity indexes are then constructed mapping Occupational Information Network (O*NET) dataset task classifications (https://www.onetcenter.org/database.html) to occupational data from surveys in each country. Indexes for each country are normalized to zero for the first year of the data to show changes in the task-skill composition of jobs over time. For additional methodological details, see Mason, Kehayova, and Yang (2018).
nonroutine analytical and interpersonal tasks—are observed to increase only after 2006 and 2010, respectively. In Vietnam, jobs intensive in routine manual tasks did not decline over the period, likely reflecting the large share of the country’s labor force still in agriculture and its continued specialization in low-skill, labor-intensive manufacturing.\textsuperscript{10}

From the early 2000s to 2015, in all six countries, task-skill intensities have changed most rapidly among relatively younger cohorts of workers. This can be seen in figure 3.7, which shows the evolution of task-skill combinations for three age cohorts: those born before 1958, those born 1958–77, and those born after 1977.

**FIGURE 3.7** Change in task-skill intensity of jobs in several East Asian countries, by birth cohort, early 2000s to 2015

*figure continues next page*
FOSTERING INCLUSIVE GROWTH

Tasks intensive in cognitive skills (especially nonroutine analytical and interpersonal skills) have increased and tasks intensive in manual skills have declined most among the cohort of workers born after 1977. As in figure 3.6, these patterns reflect the structural changes in these economies along with rising educational attainment among subsequent cohorts of workers. Although similar, albeit more modest, shifts in task-skill intensity are also observed among workers born in other decades.
Intensities are seen among older cohorts in Mongolia, the Philippines, and Vietnam between 2000 and 2015, little change is observed among older cohorts in Indonesia, Malaysia, or Thailand.

Task-skill intensities also appear to differ systematically by gender across the region. In general, women work in occupations with lower manual task content than men. Moreover, in most countries, task-skill intensities have evolved more rapidly away from manual tasks and toward cognitive tasks for women than for men (figure 3.8). In fact, in Indonesia and Malaysia, virtually all of the shift toward cognitive tasks over the period is observed among women.

**FIGURE 3.8** Change in task-skill intensity of jobs in several East Asian countries, by gender, early 2000s to 2015

*figure continues next page*
FIGURE 3.8  Change in task-skill intensity of jobs in several East Asian countries, by gender, early 2000s to 2015 (continued)

Source: Mason, Kehayova, and Yang 2018.
Note: Figure presents percentage changes in the task-skill intensity indexes for jobs between the early 2000s and 2015. The exact time horizon for each country reflects data availability in that country. Tasks are categorized as "routine" or "nonroutine" based on how repetitive or structured they are, and as "manual-physical" or "cognitive" (including interpersonal or analytical) based on the type of work involved. Task-skill intensity indexes are then constructed mapping Occupational Information Network (O*NET) dataset task classifications (https://www.onetcenter.org/database.html) to occupational data from surveys in each country. Indexes for each country are normalized to zero for the first year of the data to show changes in the task-skill composition of jobs over time. For additional methodological details, see Mason, Kehayova, and Yang (2018).
A recent study has also examined evolving task and skill intensities in China from 2000 to 2015, using census and intercensal data (Du and Park 2017). The observed patterns for China are somewhat different from those found for other countries in developing East Asia (figure 3.9). Whereas tasks intensive in routine cognitive skills have increased over the period, so have tasks intensive in nonroutine manual tasks. And, in contrast to most other countries in the region, tasks intensive in nonroutine cognitive analytical and interpersonal skills declined from 2000 to 2010 before increasing from 2010 to 2015. Indeed, tasks intensive in both nonroutine analytical and interpersonal skills registered a net decline over the full 15-year period. Moreover, tasks intensive in routine manual skills increased from 2000 to 2010 before falling after 2010.

The observed reversals in trends for different task-skill combinations over the period suggest that the dynamics of the Chinese labor market have shifted in recent years (Du and Park 2017). In fact, looking solely at the 2010–15 period, the patterns of evolving task-skills intensities in China appear much closer to those observed elsewhere in developing East Asia since 2000, with nonroutine cognitive tasks increasing and routine manual tasks decreasing most rapidly. In contrast to other countries, however, nonroutine manual tasks continue to rise throughout the period.

In analyzing patterns of occupational change in China over the 2000–15 period, Du and Park (2017) find that structural changes—and especially significant growth of retail jobs during the period—contributed significantly to the observed increase in routine cognitive skills and the reduced demand for more-abstract skills. Structural changes in the economy have not yet contributed to an overall increase in demand for more nonroutine cognitive skills among Chinese workers, although the post-2010 trends suggest that is changing.

Rising returns to higher-order skills

School enrollment rates and educational attainment have been rising rapidly throughout developing East Asia (World Bank 2018d). Nonetheless, the demand for higher-order skills is rising among firms in the region, and this demand for more advanced skills is likely to rise even more quickly in the future as new technologies are adopted by firms seeking to remain competitive in a changing global and regional economic environment.

Employers across developing East Asia already report finding it difficult to find the right skills to fit their needs, as several examples illustrate. In Vietnam, nearly half of the employers surveyed as part of the Skills Toward Employment and Productivity (STEP) survey indicated that graduates lacked the skills needed in their workplace (Bodewig and others 2014). In the Philippines, about one-third of surveyed employers reported being unable to fill vacancies because of a lack of applicants with requisite skills (Acosta and others 2017). In China, up to three-quarters of entrepreneurs responding to a recent survey indicated that finding adequate technical and managerial skills was difficult (World Bank and DRC, forthcoming).

Skill premia, along with skill scarcity, are reflected in the rates of return to higher levels of education. Labor market returns to tertiary education in Indonesia are not only higher
than those at the primary or secondary level but are also increasing, suggesting a growing scarcity value associated with higher-order skills (Fasih, Afkar, and Tomlinson 2018). In urban China, there is now a 17 percent wage premium for high school graduates and a 55 percent wage premium for college graduates (and above) relative to those with middle-school or less education (Du and Park 2017). In Vietnam, hourly earnings of university-educated workers in the private sector are 60 percent higher than those who graduated lower secondary school (Demombynes and Testaverde 2017). Although these wage premia may reflect higher productivity among university-educated workers, a recent analysis of jobs in Vietnam argues that because employers are most concerned about skills gaps in those occupations that university workers hold (technical, professional, and managerial professions), higher returns to tertiary education most likely reflect shortages of those with (even limited) university education (Cunningham and Pimhidzai 2018).

Demand for analytical and interpersonal skills is growing, and there is evidence that such tasks command wage premia in the labor markets of developing East Asia, even controlling for education. In Vietnam, nonroutine analytical and interpersonal tasks command particularly high wage premia (Macdonald 2018) (figure 3.10). Data on urban labor markets in China show similar patterns—positive and significant returns to nonroutine cognitive analytical tasks (Du and Park 2017)—although wage premia associated with routine cognitive tasks are negative once education is independently accounted for. New analysis conducted for this report on Indonesia, Mongolia, the Philippines, and Vietnam suggests, moreover, that returns to nonroutine analytical tasks are generally increasing over time (Macdonald 2018).11

How prepared is developing East Asia to foster inclusive growth in the future?

As countries in developing East Asia move from middle-income to high-income status, governments in the region will face the challenge of ensuring that their populations have the skills needed to participate and contribute successfully in increasingly sophisticated and complex economies. As technology becomes an increasingly integral part of economic enterprise, countries will also face the challenge of ensuring that people have broad, affordable access to digital technologies, are digitally “literate,” and have access to the resources needed to make the most of these tools.

This section examines where developing East Asian countries stand with respect to endowing their populations with the skills, technology, and related resources to enable them to participate effectively in future growth. It also examines where countries stand in providing support to workers who have difficulty making the necessary skills and jobs transitions as economic circumstances change. The section concludes with a brief discussion on the extent to which governments in developing East Asia are using public spending and taxes to promote inclusive growth.
Education, learning, and skills

Countries in developing East Asia have made significant progress in increasing access to education for their populations in recent decades. As highlighted in chapter 1, high upward mobility in education has been one of the hallmarks of the region’s development experience. The average adult in East Asia now has about eight years of schooling, twice what it was in 1975 (World Bank 2018d).

Nonetheless, the region faces considerable challenges as countries seek to move from middle-income to high-income status. A recent World Bank report on education in East Asia, Growing Smarter, finds that while 40 percent of students in developing East Asia are achieving learning outcomes at or about the levels of Organisation for Economic Co-operation and Development (OECD) countries, the other 60 percent still face significant challenges in building the needed foundational skills (World Bank 2018d). Even where students are demonstrating strong learning outcomes, countries face continuing challenges in endowing their populations with 21st-century skills.

Standardized learning assessments, such as the Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS), help policy makers understand how schooling outcomes translate into learning in a number of countries. In developing East Asia, test takers in four major metropolitan areas in China (Beijing, Shanghai, Jiangsu, and Guangdong) and in Vietnam have done particularly well on international assessments, suggesting that students in these locales are developing the types of strong foundational skills—in reading, math, and science—required to participate successfully in the changing economic environments (figure 3.11). Test scores among students in Beijing, Shanghai,

FIGURE 3.11 Average student performance on standardized learning assessments in several East Asian economies, 2000s

![Graph showing average student performance on standardized learning assessments in several East Asian economies, 2000s.](image)

Source: World Bank 2018d.

Note: Calculations based on Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS) scores on nine assessments since 2000 (for PISA) and 2003 (for TIMSS). Figure shows composite constructed average performance score over all available test iterations, with mean of 500 points and standard deviation of 100 points. The Philippines has only participated in TIMSS. B-S-J-G (China) = Beijing, Shanghai, Jiangsu, and Guangdong, China.
Jiangsu, and Guangdong, China, and in Vietnam are higher than would be expected given their per capita income levels; indeed, scores in both Vietnam and the four Chinese urban centers surpass OECD averages (World Bank 2018d). At the same time, learning outcomes are noticeably lower than would be expected in several developing East Asian countries, including Indonesia, Malaysia, the Philippines, and Thailand. Evidence from PISA and Early Grade Reading Assessments (EGRAs) in the region also indicate that the prevalence of poor reading proficiency is alarmingly high among students in some countries (figure 3.12). In Indonesia, Malaysia, and Thailand, over one-third and as much as 55 percent of students were below basic proficiency levels on the PISA reading assessments (World Bank 2018d). In 2012, nearly one-third of Cambodian and Laotian second grade students could not read even one word.

Moreover, despite considerable progress in the region, inequalities in educational opportunities persist across socioeconomic groups. Although countries in developing East Asia have made significant progress in closing gaps in access to education between the poor and nonpoor—especially in basic education—important differences in access remain, particularly at the secondary level and beyond (figure 3.13).

Inequalities in educational opportunities are reflected not only in school access but also in learning outcomes. Students from poorer families consistently demonstrate lower proficiency in reading, math, and science than wealthier students (figure 3.14). So, even when students from poorer backgrounds attain higher schooling, they commonly face learning and skills deficits relative to their wealthier counterparts. And those skills gaps will create challenges for those individuals to participate successfully in their countries’ labor markets as countries develop. This, in turn, represents a continuing challenge for the region’s governments to ensure that the benefits of growth are shared.

![Figure 3.12](image-url) Share of students performing below minimum proficiency on international reading assessments, developing East Asian countries, 2010s

Source: Adapted from World Bank 2018d.

Note: The Programme for International Student Assessment (PISA) percentages indicate the share of 15-year-old students scoring below level 2 (the minimum considered proficient) on the reading assessment. The Early Grade Reading Assessment (EGRA) percentages indicate the share of second-grade students who are unable to read a word. PISA reading scores are from 2015, except for Malaysia (2012). National EGRA dates are Cambodia (2012), Lao PDR (2012), Myanmar (2015), and the Philippines (2014). China (B-S-J-G) = Beijing, Shanghai, Jiangsu, and Guangdong, China.

![Figure 3.13](image-url) School enrollment rates among 16- to 18-year-olds in several developing East Asian countries, by welfare status, mid-2010s


Note: Extreme poor = per capita consumption below the international poverty line (US$1.90 per day at 2011 purchasing power parity [PPP]). Moderate poor = per capita consumption of US$1.90–US$3.20 per day. Economically vulnerable = per capita consumption of US$3.20–US$5.50 per day. Economically secure = per capita consumption of US$5.50–US$15.00 per day. Middle class = per capita consumption exceeding US$15.00 per day.

a. Sample sizes for the extreme poor in Mongolia and Thailand were too small to enable reliable estimates of schooling outcomes.
The learning and skills development challenges that countries face in developing East Asia can be placed in perspective by comparing data on current learning outcomes with those achieved by the Republic of Korea during its rise from middle-income to high-income status. Korea is among the countries in East Asia that has automated most rapidly, as measured by its operational stock of industrial robots and by its high robot density (number of robots per 1,000 employees), as shown in chapter 1, figure 1.17.

Figure 3.15 plots the test score data shown earlier in figure 3.11 for developing East Asian countries, but this time according to their per capita income as well as relative to Korea’s 30-year trajectory. By plotting comparable test scores for Korea at 10-year intervals—from 1985 (when Korea was still a middle-income country) to 2015—the figure shows that, even as a middle-income country, Korea achieved relatively high learning outcomes. And its measured learning outcomes have continued to improve as the country has grown richer. The skills associated with those learning outcomes provided a critical foundation in Korea, both for endowing the population with higher-order skills and for achieving inclusive growth as the country transitioned to high-income. Countries of developing East Asia thus face a dual challenge in building the skills base for inclusive growth: (a) continuing to develop strong foundational skills among their populations, and (b) increasingly providing their populations the opportunity to attain higher-order skills.

Digital technology access
As with learning and skills development, making digital technology broadly available represents an increasingly important challenge to ensuring that the benefits of growth are shared in developing East Asia as these countries seek to move from middle income to high income. Despite rapid advances, broad and inclusive digital technology access is still very much a work in progress across the region. Whereas by 2016, there were 95 cell phone subscriptions per 100 people in...
the region, only about half of the population had access to the internet—and with considerable variation across countries (chapter 1, figure 1.8). Moreover, there remain significant inequalities in access and use of digital technologies across socioeconomic groups within countries.

In countries where cell phone penetration is already high, inequalities in access across socioeconomic groups are relatively small, as would be expected (figure 3.16). Nonetheless, household survey data suggest that inequalities in cell phone access are still relatively large in countries with lower average penetration levels, such as Myanmar and Vietnam. Internet penetration tends to be much lower than cell phone access across developing East Asia. And wherever overall internet access is lower, inequalities across socioeconomic groups are also larger. Data from Indonesia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam show consistently low internet use among poor households—both in absolute terms and relative to middle-class or even economically secure households (figure 3.17).14

Promoting greater equality of access to and use of affordable digital technologies has significant potential in supporting and enabling inclusive growth. As discussed above, digital technologies can play a critical role in reducing the costs of accessing markets and information in ways that enable poor and economically vulnerable people to improve their livelihoods. It can also contribute to better access to goods and services including, importantly, enhanced financial inclusion (box 3.4).

Nonetheless, poor and vulnerable people still face a number of barriers to access and effective use of digital technologies. A recent report on mobile-phone ownership and use finds that cost, knowledge of how to use the technology, and in some instances, understanding of the relevance of the technology, were the main barriers identified by both women and men in developing East Asia with respect to accessing mobile technology (GSMA 2018).15 Sparse availability of digital and broadband networks also remains a challenge in many remote, rural areas across the region.

FIGURE 3.16 Household cell phone ownership in several developing East Asian countries, by welfare status, mid-2010s

Source: World Bank East Asia and Pacific Team for Statistical Development. Note: Figure shows the share of households owning at least one cell phone. Extreme poor = per capita consumption below the international poverty line (US$1.90 per day at 2011 purchasing power parity [PPP]). Moderate poor = per capita consumption of US$1.90–US$3.20 per day. Economically vulnerable = per capita consumption of US$3.20–US$5.50 per day. Economically secure = per capita consumption of US$5.50–US$15.00 per day. Middle class = per capita consumption exceeding US$15.00 per day. Welfare groups are classified based on per capita income for Philippines and per capita expenditure for other countries. a. Sample sizes for the extreme poor in Mongolia and Thailand are too small to enable reliable estimates of schooling outcomes.

FIGURE 3.17 Household internet use in several developing East Asian countries, by welfare status, mid-2010s

Source: World Bank East Asia and Pacific Team for Statistical Development. Note: Welfare groups are classified based on per capita income for Philippines and per capita expenditure for other countries (all in 2011 purchasing parity power [PPP] terms) as follows: Extreme poor = ≤US$1.90 per day. Moderate poor = US$1.90–US$3.20 per day. Economically vulnerable = US$3.20–US$5.50 per day. Economically secure = US$5.50–US$15.00 per day. Middle class = ≥US$15.00 per day. Sample sizes for the “extreme poor” in Mongolia and Thailand are too small to enable reliable estimates of internet use.

a. For Indonesia and Mongolia, the internet variable captures household use of the internet whether or not it has an internet subscription.
b. For Myanmar, the Philippines, Thailand, and Vietnam, the internet variable measures whether the household has an internet subscription.
Financial inclusion—as measured by the share of adults who own an account at a financial institution or through a mobile money provider—is rising in developing East Asia, in line with global trends. Since 2011, the largest increases were registered in Indonesia (where the share of adults with an account rose by 29 percentage points, to 49 percent); Malaysia (where it rose by 19 percentage points, to reach 85 percent); Cambodia (where it rose by 18 percentage points, to reach 22 percent); and China (where it rose by 16 percentage points, to reach 80 percent).

However, high variation in financial inclusion persists not only across the region’s countries but also across socioeconomic groups within countries (figure B3.4.1). In 2017, large gaps in account ownership between the bottom 40 percent and the top 60 percent of the population existed in the Philippines (27 percentage points), China and Indonesia (20 percentage points), Lao PDR (19 percentage points), and Vietnam (18 percentage points).

Among those who own accounts, use of digital technologies to make or receive payments is also increasingly prevalent. Two-thirds or more of the wealthiest populations in China, Malaysia, Mongolia, and Thailand were making or receiving digital payments in 2017 (figure B3.4.1). Differences between higher and lower income groups in terms of digital payment access are even more marked than those related to account ownership, however. This raises concerns that poorer households face multiple disadvantages with respect to financial inclusion. Not only do they have lower levels of financial account ownership, but when they do have accounts, they are less likely to benefit from existing digital payment systems.

As East Asian countries continue to develop, access to digital finance will become an increasingly important aspect of financial inclusion—not only for enterprise development or e-commerce participation but also for participation in government social programs. Indeed, on the latter, e-payments will likely be increasingly important to improving the efficiency of government transfer and service administration, while providing incentives for the so-called “unbanked” to join the system.

As digital technologies become increasingly important in developing East Asia, ensuring that both the poor and nonpoor have access to such technology will thus be important to promoting greater financial inclusion and, more broadly, to promoting equality of economic opportunity and inclusive growth.

Source: Demirgüç-Kunt and others 2018.
Support for making the economic transition

Not all workers in developing East Asia will be equally capable of making necessary economic transitions, even with improvements in education systems or improved digital access. Older workers; poor and economically vulnerable populations; and those from more-remote, less-developed regions (that is, with lower-quality education) may be particularly vulnerable in the face of rapid economic changes. For this reason, another important challenge for policy makers in developing East Asia will be to put in place systems of support—training and skills upgrading of current workers and safety nets for newly unemployed or redundant workers—to help those who are poorly equipped to make the transition to more skills-based, technology-driven economies. This would include strengthening countries’ social assistance, social insurance, and employment support systems to ensure that those who find the transition difficult do not fall into poverty.

Strengthening these types of social supports will present their own sets of challenges for developing East Asian countries. First, overall public social spending in developing East Asia is low as a share of gross domestic product (GDP) (figure 3.18), as is spending specifically on the sorts of social safety nets and employment programs that would be important to supporting those who find it difficult to transition to more skill-intensive modes of employment. For example, public spending on social safety nets in developing East Asia accounts for about 0.7–0.8 percent of GDP (depending on whether health fee waivers are included as part of safety net spending) compared with about 1.5 percent of GDP worldwide, 1.3–1.6 percent of GDP among lower- and upper-middle-income countries as a group, and 2.7 percent of GDP in OECD countries (World Bank 2018g; World Bank ASPIRE database).

Spending on active labor market programs (ALMPs) such as skills development and training, employment services, and support to the self-employed and entrepreneurial enterprises is even lower, at 0–0.16 percent of GDP. Although global benchmarks for ALMP spending are not available, average spending on these programs in developing East Asia as a share of GDP is roughly half of what it is in middle-income Latin America (Betcherman and Moroz 2018).

**FIGURE 3.18** Government spending on social sectors, by category, in developing East Asia relative to other regions and high-income economies, circa 2010s

![Graph showing government spending on social sectors by category in developing East Asia relative to other regions and high-income economies, circa 2010s.](Image)
Safety net coverage in developing East Asia is also relatively low, at least compared with other middle-income regions (for example, Latin America and the Caribbean or Europe and Central Asia), as shown in figure 3.19. Taken together with low spending levels, this suggests that the size of program benefits—and, thus, the protective effects of programs—is also not very large.

As importantly, social protection and labor programs in developing East Asia often focus on structural conditions (such as poverty); specific groups (such as youth, the elderly, or the disabled); or access to basic services (such as health care). Although these emphases are important, there is considerable scope to broaden the focus to address difficult economic transitions. Currently, only a small share of ALMPs address unemployment, for example, and those programs mostly target specific demographic groups (such as the young or elderly unemployed). Moreover, unemployment insurance programs only exist in a subset of countries (China, Mongolia, Thailand, and Vietnam) and, in general, cover only a relatively small share of all unemployed persons (Betcherman and Moroz 2018).

**Fiscal policy for inclusive growth**

Looking beyond social policy, fiscal policy—both spending and taxation policy—has only had a limited role in promoting inclusive growth in developing East Asia to date. Given the emerging challenges associated with fostering inclusive growth, another important challenge facing governments in developing East Asia is making more effective use of fiscal policy as a tool for inclusive growth.

The limited effect of direct taxes and transfers on inequality in developing East Asia can be seen in figure 3.20, which compares inequality measured by the Gini coefficient for market income (x axis) with the Gini coefficient for disposable income, that is, after taxes and transfers (y axis). The figure shows data from 60 countries, including 7 from developing East Asia. The farther below the 45-degree line a country lies in the figure, the more equality enhancing is the country’s system.
of taxes and transfers. As can be seen in the figure, all of the developing East Asian countries are situated close to the 45-degree line.

Although none of the systems of taxes and transfers in developing East Asia worsens inequality, they have relatively little effect on mitigating it. In contrast, the effects of taxes and transfers in high-income economies tend to be strongly equality enhancing. For example, at 0.484, Finland’s Gini coefficient for market income is not that different from that of the Philippines (0.481). After taxes and transfers, however, Finland’s Gini coefficient for disposable income falls to 0.269, whereas that for the Philippines barely changes (0.461).

It is important to highlight that governments have multiple fiscal instruments at their disposal, not only direct taxes and transfers. These include indirect taxes and transfers, subsidies, and spending on noncash (or “in-kind”) benefits and services. While generalized subsidies tend to benefit the more economically advantaged segments of society, other fiscal instruments can be equality enhancing (Ruggeri Laderchi 2018). A study of five European countries found, for example, that in-kind benefits (including public housing subsidies, education, and health care) dramatically reduced income inequality relative to the effect of direct taxes and transfers alone (Paulus, Sutherland, and Tsakloglou 2010). This appears to be the case in developing East Asia as well. Data from Indonesia, Mongolia, and Vietnam show that the equality-enhancing effects of several fiscal instruments combined are greater than the effects of direct taxes and transfers alone (figure 3.21).

As figure 3.21 indicates, different fiscal instruments affect inequality in Indonesia, Mongolia, and Vietnam in different ways. For example, direct transfers have had a larger equality-enhancing effect in Mongolia, whereas in-kind benefits—essentially, public spending on education and health—have had larger equality-enhancing effects in Vietnam. In Indonesia, some combination of direct transfers and in-kind benefits contributed to reducing inequality.

Consistent with the earlier discussion on generalized subsidies, figure 3.21 also shows...
that indirect taxes and subsidies actually served to increase inequality in Mongolia and Vietnam. Tax and benefit incidence analysis conducted for Indonesia and Vietnam shows in greater detail how different fiscal instruments affect households differently at different points in the income distribution (box 3.5).

The bottom line is that while some countries in developing East Asia have made modest contributions to inclusive growth via their fiscal systems, the range of fiscal policy tools available to promote inclusive growth remain underused (Ruggeri Laderchi 2018). In making the transition from middle income to high income, countries in developing East Asia face the challenge, and the opportunity, to foster inclusive growth in changing economic environments.

As will be discussed later in the report, using fiscal policy to support inclusive growth (including financing the agenda of higher-income, increasingly middle-class societies) may require development of a new social contract—one that provides greater voice to citizens and greater government accountability on the part of government, and that delivers quality services broadly—in return for greater participation and compliance in the tax system.18

**BOX 3.5  The redistributive impacts of fiscal policies in Indonesia and Vietnam: A more detailed look**

Detailed examination of the distributional impacts of different types of taxes and benefits helps clarify why some fiscal instruments are more effective than others at promoting inclusive growth. Figure B3.5.1 shows this for Indonesia and Vietnam by income decile—highlighting both the absolute distribution of taxes and benefits (the absolute amounts being paid or received by different groups of households) and their relative distribution (the same amounts expressed as a percentage of households’ pretax and pretransfer income).

Regarding taxes, only the wealthiest 10 percent of households appear to pay direct taxes in Vietnam in any significant amount. Households in the lowest deciles, for their part, also contribute significantly to the government budget, although through indirect taxes (such as value added taxes and excise taxes). And although they contribute less than their richer counterparts in absolute terms, they contribute much more as a share of their incomes.

A similar pattern for indirect taxation can be seen in Indonesia. Note that the Indonesia analysis does not include direct taxes, because few households in the Indonesian National Socio-Economic Survey (SUSENAS) report paying personal income tax. This reflects limitations not only in the data (that is, very low survey coverage of high-income households) but also in the design and administration of personal income taxes, with relatively few Indonesian households paying into the system.

Regarding benefits, in both Indonesia and Vietnam, direct transfer programs deliver resources mostly to lower-income households, both in absolute and especially in relative terms. Indirect subsidies, which are captured in the Indonesian data, appear to account for a nonnegligible share of lower-income household resources. Note, however, that higher-income households, which spend more on the subsidized goods (fuels, in this case) benefit more in absolute terms. Finally, in both Indonesia and Vietnam, noncash benefits in the form of publicly funded health and education services make up the single largest benefits going to lower-income households. Indeed, the monetary value of these benefits make up a much greater share of income among lower-income households than among higher-income groups.

Examining jointly how countries tax and spend not only helps clarify how effective fiscal systems

*box continues next page*
BOX 3.5  The redistributive impacts of fiscal policies in Indonesia and Vietnam: A more detailed look (continued)

FIGURE B3.5.1  Incidence of taxes and benefits in Vietnam and Indonesia, by market income decile, mid-2010s

(a) Vietnam, 2014

(a.1) Absolute distribution of benefits

(a.2) Relative distribution of benefits

(b) Indonesia, 2016

(b.1) Absolute distribution of benefits

(b.2) Relative distribution of benefits

Source: Ruggeri Laderchi 2018.

Note: “Market income” refers to income before taxes and transfers. Deciles range from 1 (poorest) to 10 (richest).

are in promoting inclusive growth but also can illuminate which fiscal instruments are driving which results. In Indonesia and Vietnam, although fiscal systems (including publicly financed services) are mildly equality enhancing, the data make clear that there remains considerable scope for making the region’s fiscal systems more effective in promoting inclusive growth.

Source: Ruggeri Laderchi 2018.
Conclusion

In sum, as the countries in developing East Asia strive to move from middle-income to upper-income status in changing country, regional, and global environments, governments will face several key challenges to making sure that the benefits of growth are widely shared. The most important of these are

- Ensuring that people have adequate skills to participate effectively in increasingly skills-driven economies;
- Providing broad, inclusive, and affordable access of countries’ populations to digital technologies and supporting them in achieving basic digital literacy;
- Strengthening countries’ social protection and employment support systems to ensure that workers have adequate support in making difficult transitions to the new economy; and
- Better using the tools of fiscal policy to ensure that governments can effectively promote growth that is inclusive.

The elements of public action that can help address these challenges will be discussed in chapter 5.

Notes

1. The “extreme poor” are defined in this volume as those whose per capita consumption is below the international poverty line (US$1.90 per day at 2011 PPP), while the “moderate poor” are those whose per capita consumption is between US$1.90 per day and US$3.20 per day at 2011 PPP (also referred to as the “lower middle-income poverty line”). The economically vulnerable have per capita consumption of between US$3.20 and US$5.50 per day; the economically secure, US$5.50 to US$15.00 per day; and the middle class, exceeding US$15.00 per day.

2. This study refers to several waves of development in East Asia as follows: the “first wave” refers to the so-called newly industrializing economies: Hong Kong SAR, China; Korea; Singapore; and Taiwan, China. A second wave of countries (China, Indonesia, Malaysia, and Thailand) followed in the 1980s with sustained growth through the latter part of the 1990s. In the 21st century, a third wave has followed, including Cambodia, the Lao People’s Democratic Republic, Mongolia, Myanmar, the Philippines, and Vietnam.

3. For more detail on the contribution of labor income to poverty reduction, see World Bank (2013, 2014).

4. The contributions of outward orientation and agricultural development to productivity are discussed in chapter 2.


6. For Cambodia, Myanmar, and Vietnam, see World Bank (2018a), Cunningham and Muñoz (2018), and Cunningham and Pimhidzai (2018), respectively. In Lao PDR, more than two-thirds of the labor force still work in agriculture (World Bank 2017).

7. Revealed comparative advantage (RCA) is defined as the ratio of a sector’s share in a country’s total exports to that sector’s share in world exports. More specifically, country “i” is deemed to have relative comparative advantage in sector “j” if \( \text{RCA}_{ij} > 1 \).

8. For a more detailed discussion of recent analyses of automation and jobs in developing East Asia, see Mason, Kehayova, and Yang (2018).

9. Similar patterns are also seen for Cambodia for the 2011–15 period. Those findings are not presented in the figures, however, given the short time periods for which the analysis was possible.

10. Consistent with the global evidence, the developing East Asian countries with lower per capita income levels (for example, Cambodia, Lao PDR, and Vietnam) demonstrate lower intensities of nonroutine and analytical tasks measured in absolute terms (Macdonald 2018; Mason, Kehayova, and Yang 2018).

11. Returns to nonroutine analytical tasks were found to be increasing in Mongolia, the Philippines, and Vietnam. No evidence of rising returns was found in Indonesia to date, however.

12. Test scores in Vietnam and in Beijing, Shanghai, Jiangsu, and Guangdong, China, are higher than OECD averages at equivalent points across the respective countries’ welfare distributions (World Bank 2018d).
13. Although comparable proficiency data are not available for China outside Beijing, Shanghai, Jiangsu, and Guangdong, a study carried out jointly by China’s Development Research Center and the World Bank discusses continuing learning challenges faced by students in China’s rural areas (World Bank and DRC, forthcoming). A forthcoming book on human capital development in China highlights similar challenges (Rozelle and Johnson, forthcoming).

14. Reported internet use is systematically lower in surveys that focus on “internet subscriptions” as opposed to “internet use” whether or not a household has purchased a subscription. Similar levels and patterns of inequality are also found in household survey data regarding household computer ownership in these countries. There are strong spatial patterns of digital technology access in each country, which largely mirror spatial patterns of wealth and poverty.

15. The GSMA (2018) study focuses on gender gaps in ownership and use of mobile technology. It finds relatively small gender gaps in mobile access in developing East Asia (China, Indonesia, Myanmar, the Philippines, and Thailand) compared with other developing regions and, in China, some instances of small “reverse gender gaps.” What is particularly striking about the report is how similar East Asian women’s and men’s survey responses are about the barriers to accessing mobile technology.

16. The regional average conceals considerable variation in spending across countries in developing East Asia, however, with Lao PDR and Myanmar spending a fraction of a percentage point of GDP per year and Mongolia spending above the global average (World Bank 2018g; World Bank ASPIRE database, datatopics.worldbank.org/aspire/).

17. The traditional approach to dealing with unemployment in developing East Asia has been through severance programs. Such programs can be problematic, however, particularly in rapidly changing economic circumstances. Current regulations in several developing East Asian countries (for example, China, Indonesia, and Lao PDR) result in high severance costs for firms, impeding worker transitions that may be desirable from a productivity perspective (World Bank 2013). From the perspective of economic inclusion, severance schemes create a dualism in the labor market and leave most workers—those outside the formal sector—unprotected in the face of job loss. See chapter 5 for a discussion of policies to support workers in making needed economic transitions in rapidly changing economic circumstances.

18. The challenges of raising fiscal revenues to finance the transition to high-income status are discussed in chapter 4.

References


Enhancing State Effectiveness

Introduction

A key pillar of East Asia’s traditional “growth with equity” model has been sound economic governance. Three distinct, but related, elements characterized this pillar. First, there was a sustained commitment to maintaining macroeconomic stability in the form of stable and usually low inflation and long-term fiscal discipline. This emphasis stemmed from the recognition that macroeconomic stability was essential for promoting outward-oriented growth, including attracting significant foreign direct investment. Second, East Asia’s policy makers sought to rely primarily on markets in allocating resources. As discussed in chapter 1, this did not mean rejecting all forms of intervention. It did mean, however, that so-called industrial policies were designed to be consistent with market signals and incentives. Moreover, policies were monitored and adapted or eliminated if they became too costly. Third, good economic governance relied on the development of at least small cadres of well-trained, competent civil servants who were largely shielded from political interference, along with regular consultation between the government and business.

As countries in developing East Asia seek to transition from middle- to high-income status, they will face both old and new governance challenges as well as increasingly rigorous demands on institutions of the state. The earlier need for sound economic governance, as traditionally defined, still exists. But the institutional and governance challenges facing developing East Asia will be broader and deeper than they were at earlier stages of development. As the region’s economies become more sophisticated and more complex—and as the global economic and technological environment changes—there will be a higher technical bar for sound economic policy making. In addition, as policy makers seek to build increasingly affluent, middle-class societies, they will face increased demand for more and better-quality services. As importantly, efforts to promote greater state effectiveness will occur within a changing political economy that, itself, can make the identification and implementation of appropriate solutions more challenging than in the past (Malesky 2018; World Bank 2017b).
Three political economy challenges, in particular, characterize the transition from middle- to upper-income status:

- The emergence of new interest groups and the resulting political economy raise new risks of “capture” in the policy-making process.
- The new political economy makes it more difficult to build broad-based coalitions for sustainable policy reform.
- As markets expand and production networks become more complex, traditional deals-based relationships are no longer an adequate substitute for rules-based contract enforcement.

Moreover, with rising affluence comes rising societal expectations about the range and quality of services that the state delivers, including from a larger and more vocal middle class.

In short, a country’s efforts to move from middle income to high income effectively raise the bar for what is required from its state institutions. Moreover, failure to address these governance challenges can jeopardize the realization of measures needed to sustain productivity growth and to ensure that growth is inclusive. Enhancing state effectiveness is thus an integral part of making a successful transition from middle-income to upper-income status.

This chapter examines the key institutional and governance challenges associated with developing East Asian countries’ efforts to transition to the high-income ranks. It begins by reviewing the current state of state effectiveness in developing East Asia, building on the discussion of governance in chapter 1. It then examines the political economy and governance challenges associated with the transition from middle income to high income. The chapter also discusses the rising societal expectations that accompany rising incomes and the emergence of increasingly middle-class societies. Building on the insights from that analysis, the chapter turns to several challenges and opportunities faced by developing East Asian countries as they seek to enhance state effectiveness. The discussion focuses first on several potential entry points for addressing the region’s political economy and governance challenges—citizen voice and participation, government transparency, accountability, and bureaucratic quality—and then examines the challenge associated with financing the transition to high-income status.

The state of state effectiveness in developing East Asia

How does developing East Asia stack up concerning key state institutions? The Worldwide Governance Indicators (WGI) provides data on several measures that are relevant to state effectiveness, including on government effectiveness, control of corruption, rule of law, and voice and accountability.1

As noted in chapter 1, developing East Asian countries tend to score relatively well on government effectiveness. Seven of the 10 countries—China, Indonesia, Malaysia, Mongolia, the Philippines, Thailand, and Vietnam—ranked above the 50th percentile on WGI’s government effectiveness indicator in 2016. All but one country (Malaysia) rose in rank between 2000 and 2016, and three of the countries that improved their percentile rankings registered double-digit increases: China, the Lao People’s Democratic Republic, and Vietnam. The WGI reports standard errors of its indicator estimates, some of which are quite large. As a result, only the increases achieved by China and Vietnam can be considered statistically significant.2

The performance of much of developing East Asia on the other three governance indicators—control of corruption, the rule of law, and voice and accountability—is observably weaker. Regarding control of corruption, only one country (Malaysia) scored above the 50th percentile ranking, although two countries (Indonesia and Myanmar) registered large and statistically significant improvements in their rankings between 2000 and 2016. In contrast, 7 of the 10 countries declined in rank during the same period, although none of those changes was statistically significant.

Developing East Asian countries also continue to face challenges concerning voice and
accountability, as discussed in chapter 1. Only three countries achieved percentile ranks at or above 50 (Mongolia, the Philippines, and Indonesia), the latter two only barely. One country (Myanmar) registered a large and statistically significant increase between 2000 and 2016, although starting from a very low base. As with control of corruption, seven countries registered declines in their voice and accountability rankings over the period. Thailand experienced a particularly large and statistically significant decline, likely linked to major political changes (Malesky 2018).

To help put developing East Asia’s institutional and governance challenges in a broader, global perspective, figure 4.1 plots countries’ ranks on the four indicators against gross domestic product (GDP) per capita. Country performance on all four measures tends to rise with per capita

![Figure 4.1 Governance rankings of developing East Asian countries in a global context, by GDP per capita, 2016](image_url)

Source: Worldwide Governance Indicators (WGI) database (http://www.govindicators.org); World Bank calculations.

Note: "Developing East Asia" includes the following: Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. The diagonal regression lines indicate where countries would be expected to be ranked on each indicator, given their per capita income levels. GDP = gross domestic product; PPP = purchasing power parity.
income, although to different degrees for different measures. In the case of government effectiveness, most developing East Asian countries are above or near the regression line, suggesting that most are roughly where they would be expected to be, given their per capita incomes. This is not true for the other indicators, however, where most of the developing East Asian countries fall below the regression line. The largest gap between expectation and realization is found on the voice and accountability measures.

It is important to note that these figures are descriptive, not causal. Nonetheless, they are indicative of state effectiveness in developing East Asia. And they suggest that as countries aspire to transition from middle-income to high-income levels, strengthening the institutions of the state—enhancing state effectiveness—will be among the key challenges countries in the region will face.

### Political economy challenges in middle-income countries

In addition to the institutional and governance challenges all countries face as they develop, countries that seek to transition from middle-income to high-income levels often face a new set of political economy challenges that were less salient at lower levels of development. These are now relevant for the countries of developing East Asia, all of which are now middle income.

As countries move from low-income to middle-income status, groups that benefited most from earlier development successes may find they stand to lose from further economic reforms. As economies modernize and become more complex, a divergent set of interest groups often emerge that make building coalitions and enacting next-generation reforms more difficult. Moreover, some informal institutions that were sufficient at lower levels of development are no longer sufficient to propel countries from middle income to high income. This section examines three political economy challenges associated with middle-income status that are key to navigating the transition to high-income status.

### Policy capture

Growth and the associated economic policies that helped developing East Asian countries move from low-income to middle-income status created winners and losers in the process. And that process, in turn, created a set of interests—whether business or political elites—who have an increasingly strong interest in the status quo. As discussed in chapters 2 and 3, further reforms will be required to sustain future productivity growth and to ensure that the benefits of growth are shared. Nonetheless, those reforms may not be in the interest of those who benefited most from earlier stages of development. Indeed, because each subsequent reform effort creates winners and losers, there is a risk that those who benefited from early periods of growth will use their newfound strength to block future reform (Birdsall and Nellis 2003; Hellman 1998; Malesky 2018; World Bank 2017b).

The process of capture can take place legally through lobbying and advocacy campaigns (Bardhan and Mookherjee 2000; Frye 2002), but it can also occur through corruption and bribes to enact particular policies while blocking others (Shih 2007). This capture of domestic policy makers can hurt growth prospects, as leaders do not take the difficult steps to achieve the necessary next-generation economic reforms. Thus, while benefiting those well-connected actors, captured economies can experience weaker economic growth and growing inequality (Hellman, Jones, and Kaufmann 2003).

The “winners” may take different forms in different countries, depending on the structure of the economy and the distributional effects of early economic growth. In Lao PDR and Vietnam, for example, state-owned enterprises (SOEs) that benefited from early efforts at international integration have been effective in holding back efforts to promote competition from the private sector (Baccini, Impullitti, and Malesky 2017; Li, Cui, and Lu 2018; Pincus 2015; Pincus, Anh, and Le Thuy 2008). Consequently, despite the rapid growth in the number of private firms in both countries, the sector’s contributions...
to output and exports have hardly budged (box 4.1). Persistent dominance of SOEs in the Vietnamese economy has distorted scarce resource allocation and hindered productivity growth (World Bank and MPI 2016). In China, although the productivity of SOEs has improved in recent years, their dominance still distorts competition and impedes productivity by discouraging new entrants and deterring the more-productive firms from growing (World Bank and DRC, forthcoming).

In Cambodia, Indonesia, Malaysia, and Myanmar, the beneficiaries have often been business conglomerates with political or family ties. Vietnam provides an example in which winners from early reform periods captured the policy-making process and tilted the playing field in their favor. Since the reform started in 1986, the Vietnam Communist Party (VCP) has removed many aspects of its formerly centrally planned economy, such as collectivization, price controls, and foreign trade monopoly. For historical and ideological reasons, however, the VCP has never given up on state-owned enterprises (SOEs). In fact, the party repeatedly reaffirmed its commitment to the state sector, presumably as an instrument to maintain economic independence and employment levels (Fiord 2007; Pincus 2015).

Early during the reform period, the VCP let go of trade and price controls but did not dismantle the SOEs, in part to minimize resistance to reforms from within the state sector (Kokko and Sjoholm 2000; Leung and Riedel 2001). In fact, state-owned firms grew thanks to advantages, such as monopsony prices and their favored position with respect to exports.

Between 2001 and 2006, the foreign-invested and domestic private sectors became more competitive and threatened the commanding position of SOEs in the economy (Hill 2000). This trend ended in 2006 when Vietnam joined the World Trade Organization (WTO). The WTO accession did not reduce the role of SOEs but, to the contrary, served as a catalyst for their further entrenchment. Concerned that trade openness would leave the domestic market swamped by foreign competition, the Vietnamese leadership consolidated selected SOEs into large state-owned economic groups (SEGs) in the image of chaebols in the Republic of South Korea* (Baccini, Impullitti, and Malesky 2017; Vu-Thanh 2017). In addition to their scale, these SEGs still enjoy significant advantages over domestic and foreign competitors, including easier access to land, credit, and public procurement contracts.

Figure B.4.1.1 highlights Vietnam’s concentration of investment in large SOEs. Mean investment per enterprise in the state sector has expanded dramatically since 2007. At the same time, the average investment size of domestic private enterprises has continued to drop. In recent years, the mismanagement of SEGs has prompted calls for their dissolution. Nonetheless, preferential treatment for SOEs remains a significant concern for domestic and foreign-invested businesses, as SOEs use their political influence to ward off deepening of reform. In 2016, despite being significantly outnumbered by 400,000 domestic private firms, Vietnam’s few thousand SOEs accounted for about one-third of gross domestic product (GDP) and 10 percent of the labor force (Malesky 2017).

In their responses to the country’s 2016 Provincial Competitiveness Index survey, about 68 percent of foreign-invested firms reported having concerns with the SOE bias in the Vietnamese economy. More than 38 percent of domestic private enterprises share those concerns (Malesky 2017).

Capture by Vietnamese SOEs takes a significant economic toll. SOEs register low returns to assets and low labor productivity (World Bank and MPI 2016). Their power and economic privileges divert resources away from potentially more productive enterprises. This, in turn, creates a drag on the economy and puts at risk reforms that could help propel Vietnam from a middle-income to an upper-income country.

**BOX 4.1 State-owned enterprise capture in Vietnam**

Vietnam provides an example in which winners from early reform periods captured the policy-making process and tilted the playing field in their favor. Since the reform started in 1986, the Vietnam Communist Party (VCP) has removed many aspects of its formerly centrally planned economy, such as collectivization, price controls, and foreign trade monopoly. For historical and ideological reasons, however, the VCP has never given up on state-owned enterprises (SOEs). In fact, the party repeatedly reaffirmed its commitment to the state sector, presumably as an instrument to maintain economic independence and employment levels (Fiord 2007; Pincus 2015).

Early during the reform period, the VCP let go of trade and price controls but did not dismantle the SOEs, in part to minimize resistance to reforms from within the state sector (Kokko and Sjoholm 2000; Leung and Riedel 2001). In fact, state-owned firms grew thanks to advantages, such as monopsony prices and their favored position with respect to exports.

Between 2001 and 2006, the foreign-invested and domestic private sectors became more competitive and threatened the commanding position of SOEs in the economy (Hill 2000). This trend ended in 2006 when Vietnam joined the World Trade Organization (WTO). The WTO accession did not reduce the role of SOEs but, to the contrary, served as a catalyst for their further entrenchment. Concerned that trade openness would leave the domestic market swamped by foreign competition, the Vietnamese leadership consolidated selected SOEs into large state-owned economic groups (SEGs) in the image of chaebols in the Republic of South Korea* (Baccini, Impullitti, and Malesky 2017; Vu-Thanh 2017). In addition to their scale, these SEGs still enjoy significant advantages over domestic and foreign competitors, including easier access to land, credit, and public procurement contracts.

Figure B.4.1.1 highlights Vietnam’s concentration of investment in large SOEs. Mean investment per enterprise in the state sector has expanded dramatically since 2007. At the same time, the average investment size of domestic private enterprises has continued to drop. In recent years, the mismanagement of SEGs has prompted calls for their dissolution. Nonetheless, preferential treatment for SOEs remains a significant concern for domestic and foreign-invested businesses, as SOEs use their political influence to ward off deepening of reform. In 2016, despite being significantly outnumbered by 400,000 domestic private firms, Vietnam’s few thousand SOEs accounted for about one-third of gross domestic product (GDP) and 10 percent of the labor force (Malesky 2017).

In their responses to the country’s 2016 Provincial Competitiveness Index survey, about 68 percent of foreign-invested firms reported having concerns with the SOE bias in the Vietnamese economy. More than 38 percent of domestic private enterprises share those concerns (Malesky 2017).

Capture by Vietnamese SOEs takes a significant economic toll. SOEs register low returns to assets and low labor productivity (World Bank and MPI 2016). Their power and economic privileges divert resources away from potentially more productive enterprises. This, in turn, creates a drag on the economy and puts at risk reforms that could help propel Vietnam from a middle-income to an upper-income country.

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connections to current or previous regimes (Blunt, Turner, and Lindroth 2012; Fisman 2001; Kubo and Lwin 2010; Morgenbesser 2017; Strangio 2014). “Winners” may also appear in particular industries or sectors that have benefited from past growth. Mongolia, with its vast energy resources and commodity exports, has seen policies tilted toward these sectors (Blunt 2009; Pomfret 2011; World Bank, forthcoming[b]).
Firms that gain privileges in high-capture economies have been found to receive private benefits in the form of greater protection and support, which translates into extraordinary economic performance (Faccio 2006; Fan, Wong, and Zhang 2007). In Malaysia during the Asian Financial Crisis, for example, the market value of politically connected firms increased relative to that of unconnected firms after international capital controls were imposed, suggesting that these firms had easier access to domestic credit (Johnson and Mitton 2003). In China, private firms that thrive often do so as a result of their political connections (Li and others 2008; Shih 2007; Tsai 2007).

Difficulties in building broad-based reform coalitions

A consistent theme from the literature on economic transitions is that countries at low levels of development may rely on relatively less institutionally intensive strategies for growth and development. Moving from middle income to high income requires a different set of strategies targeted toward policies and investments that can foster an economy capable of pushing the technological frontier rather than mimicking existing technology (Gill and Kharas 2015; Woo 2009; Yusuf 2017).

Undertaking next-generation reforms relies on political coalitions. Namely, citizens and elites must form an upgrading coalition that is prepared to make advances on the business climate, competitiveness, or trade and to reorient spending of scarce public resources to develop a more skilled workforce or to promote innovation. The problem, however, is that at precisely the point when societies need to form new coalitions, the economic forces associated with the transition makes coalition building more difficult (Doner and Schneider 2016).

At earlier stages of development, the interests of diverse sets of actors in the economy may align. The East Asian growth with equity model provides a case in point. Its focus on outward-oriented growth provided new and better opportunities for private investors and firms as well as for the low-skilled workers who benefited from better, higher-paying jobs. As countries reach middle income and new types of reforms are required, the interests of key economic actors may begin to diverge, however. The interests of investors and firms may differ from those of workers, as workers seek higher wages, greater employment protections, and better working conditions. The interests of firms in different economic sectors may also diverge, depending on the expected effects of different reform paths. Increasingly divergent interests arise, as well, between domestic and foreign investors (Doner and Schneider 2016), between urban and rural residents, and between a growing middle class and poor and vulnerable groups (Desai and Kharas 2017).

Such divergences can be seen in developing East Asia. In Myanmar, for example, powerful economic interests in the capital-intensive natural resource sector compete with those of foreign investors in the growing, labor-intensive garment manufacturing sector that has emerged after the far-reaching economic reforms earlier in the decade (Taguchi and Lar 2015). Representatives of these two sectors differ on the appropriate regulatory structure and human capital investments that are needed for industrial upgrading, however. And their views are increasingly at odds with the domestic business sector emerging in Myanmar’s urban centers (Malesky 2018). These differences have made it difficult for the national legislature to move forward with many critical regulatory reforms that are required for Myanmar’s growth to be sustained. These include changes to tax and land legislation as well as to business licensing regulations, many of which date back to the colonial period (Crouch 2017; Than 2015; Turnell 2014).

The interests of different classes of workers are also diverging, and some are being reinforced by policy. As countries in developing East Asia have developed, the distinction between formal and informal workers has become increasingly important.
Although governments in the region are relative newcomers to labor market regulation compared with other middle-income regions, several countries now have relatively high levels of employment protection for formal sector workers as well as high minimum wages (World Bank 2014). These regulations serve to increase the potential conflicts of interest between formal and informal workers as well as other categories of workers. High levels of informality are positively associated with high levels of employment protection in the region (World Bank 2014). And in Association of Southeast Asian Nations (ASEAN) countries, minimum wages have been found to disproportionately reduce employment opportunities among low-skilled people, women, youth, and recent entrants to the labor market. As with other cleavages, this fracturing of interests among workers is complicating policy makers’ abilities to build coalitions for sustainable reform.

The idea of divergent reform coalitions is related to capture in the sense that early winners have greater political power. Where the arguments differ is that lobbying and corruption are not necessary for efficiency-enhancing reform efforts to stall. In this scenario, countries may not be able to enact reforms or will continue to pursue suboptimal policies because the key political actors cannot agree on a comprehensive reform program.

Institutions can play a role in avoiding these problems. Doner and Schneider (2016) argue, for example, that in Malaysia, the broad socioeconomic and ethnic heterogeneity of the Barisan Nasional coalition, which held power for an extended period until the recent elections, enabled the country to forge governing coalitions that supported some educational and technological upgrading. By contrast, when Thailand reached middle-income status, its government system was fragmented with poorly institutionalized parties and limited opportunities for coalition building. As a result, public goods and state investments were undersupplied (Hicken 2006).

**Deals-based relationships versus rules-based contracts**

The persistence of deals-based relationships between government and business pose another political economy challenge. Deals-based interactions between firms and the state are common in low-income environments. And in the face of weak institutional capacity, when markets and production networks are relatively small, such relationships may actually enable economic activity. But, such relationships can become problematic as countries develop. As markets expand and production networks become more complex, traditional “deals-based relationships” are no longer an adequate substitute for “rules-based contract enforcement” (World Bank 2017b). Linked both to capture and corruption, the failure to transition from relationship-based to rules-based systems can impede competition and productivity as well as undermine the inclusivity of growth.

Analysis of middle-income countries that have successfully made the transition to high-income status suggests that successful countries have been better at combating corruption; building formal, rules-based institutions; and strengthening government accountability through greater transparency and civil society voice (figure 4.2). Those upper-middle-income countries that have successfully transitioned to high-income status have curbed their corruption levels significantly before becoming high-income economies; those that have not made that transition have not seen reductions in corruption (figure 4.2, panel a). Combating corruption and creating a level playing field in which firms can compete and grow requires accountable institutions.

At the upper-middle-income level, legislative, judicial, media, and civil society checks on the government also become increasingly important. Indeed, countries that have successfully transitioned to high-income status tend to put stronger institutional checks in place when they are at upper-middle-income compared with those that do not make the transition. This is
seen in the larger improvements in the judicial, media, and civil society organization (CSO) indicators among transitioning countries relative to those that failed to make the transition (figure 4.2, panels b, c, and d).

Note that nearly half of the countries that transitioned recently from middle-income to high-income status are in Europe, “where the external commitment provided by the European Union accession and membership has made institutional development credible” (World Bank 2017b, 161). This suggests a useful role for external commitment mechanisms—such as deeper trade agreements of the sort described in chapter 2—that may help create incentives for and build formal structures to strengthen rules-based decision making and institutions.
Rising societal expectations

The transition from middle-income to upper-income status will bring with it more people who are economically secure and, increasingly, middle class. With a growing middle class comes rising societal expectations about the availability and quality of public service delivery. Indeed, as countries develop, emergent socioeconomic classes often create coalitions to demand better governance. Large and growing middle classes have historically played an important role in pressuring governments to deliver better public services, such as education and health. Such forces were seen, for example, in the shift of the U.S. political system in the 19th century—away from patronage and toward meritocracy (Fukuyama 2014). As they seek to move from the middle-income to high-income ranks, governments in developing East Asia will also need to find ways to address rising societal expectations about the services the state delivers and how well it does so.

Sustained economic growth and improvements in human welfare across much of developing East Asia have not been accompanied by appropriate provisions of key public services, however. Access to high-quality services including clean water, sanitation, education, health care, and internet connectivity remains a challenge for many economically secure households in the region. One-third of economically secure households and roughly 15 percent of the region’s middle class (outside China) lack one or more of the following: access to clean water, access to sanitation, and schooling opportunities for their 16- to 18-year-olds (as shown in chapter 1, figure 1.21). In several countries, national education systems still fail to provide high-quality education to economically secure and middle-class families, putting at risk the abilities of even better-off labor force entrants to compete in increasingly skills-based economies. More than 40 percent of the wealthiest quintile of students in Indonesia, Malaysia, and Thailand failed to achieve minimum proficiency levels on recent Program for International Student Assessment (PISA) exams (as shown in chapter 3, figure 3.14). Moreover, significant shares of economically secure and middle-class households in developing East Asia still lack internet connectivity (as shown in chapter 3, figure 3.17), affecting their ability to participate in and benefit from economies that will be increasingly technology driven.

Access to high-quality services is important for both future productivity and inclusive growth. But it also has an important political economy dimension as the countries of developing East Asia seek to transition to higher-income, increasingly middle-class societies. More specifically, ensuring access to high-quality public services across the welfare distribution may be an important part of a social contract in which economically secure and middle-class households—with greater economic and political clout—can either opt in or opt out of public service use. Accompanying a lack of quality public service provision, therefore, is a risk that the middle classes could turn to an insular world of private service provision while disengaging from national policy dialogue on service delivery and development outcomes. There are signs that middle-class households are opting out of key public services (figure 4.3, figure 4.4, and box 4.2). If so, this would reduce both demand and accountability for those services, which in turn could jeopardize improved public service provision more broadly.

Incentivizing the economically secure and growing middle class to opt in is also important because as the middle class continues to grow, its financial clout will be critical to financing the high-income, middle-class agenda through its greater participation in the region’s tax systems and through greater tax compliance.

Enhancing state effectiveness in developing East Asia: Challenges and opportunities

All countries face the challenge of strengthening the capacity and effectiveness of their state institutions as they develop. The political economy challenges that countries in developing East Asia now face as they seek to transition from middle income to high income—whether capture of benefits by elites; the difficulty of
building new coalitions for reform; the challenge of moving from relationship-based deals to rules-based contracts; or rising societal expectations—all add new layers of complexity to the already difficult challenge of strengthening state effectiveness. In that context, what potential tools do policy makers have to surmount these challenges?

Political scientists and economic historians argue that the development of “inclusive institutions” is critical to avoiding these political economy traps (Malesky 2018). Similarly, *World Development Report 2017: Governance and the Law* argues that capture is not inevitable as long as influence and incentives are balanced through robust public agency design and accountability mechanisms (World Bank 2017b). Indeed, research on state institutions and governance points to complementary pathways for enhancing state effectiveness, including strengthening citizen voice and participation, increasing government transparency, enhancing accountability, and upgrading bureaucratic quality. This section examines where developing East Asian countries stand with respect to these pathways, including the challenges they face and the opportunities for moving forward.

**Strengthening voice, transparency, and accountability**

As countries in developing East Asia aspire to move from middle-income to upper-income status, enabling greater voice and accountability in economic governance can contribute to more effective, sustainable policy making. “A more contestable policy arena [also] tends to be associated with higher levels of legitimacy and cooperation. When procedures for selecting and implementing policies are more contestable, those policies tend to be perceived as ‘fair’ and to induce cooperation more effectively” (World Bank 2017b, 13). Participation by citizens in the shaping of government policies can also produce more sympathy with opposing views (Fung and Wright 2001); respect for evidence-based reasoning (Almond and Verba 2015); and, critically, a greater commitment to and higher probability of societal consensus around decisions made by government (Fishkin 2009).

**Voice and participation**

As countries move from middle-income to high-income ranks—and to increasingly middle-class societies—citizens may also
A RESURGENT EAST ASIA

In Indonesia, the middle class is growing fast—by 10 percent a year between 2002 and 2016—and now accounts for 20 percent of the total population, or 52 million people. It has already doubled its share of national consumption, from 22 percent to 47 percent, and this growth is expected to continue. Comprising a growing segment of the population and controlling significant economic resources, the middle class will be a key player in shaping the future of Indonesia, at the ballot box and as consumers of public and private goods and services.

To have a sense of how the middle class will wield this power, much can be learned by looking at the characteristics and choices this group makes now. A World Bank study on the middle class in Indonesia identifies three key features (World Bank, forthcoming[a]):

- Although middle-class Indonesians face a low risk of falling back into poverty, many have been unable to escape important aspects of nonmonetary deprivation. Half of them experience some form of nonmonetary deprivation, mostly related to poor housing conditions. This puts Indonesia—and other countries in developing East Asia—at odds with what happens elsewhere in the world (World Bank 2018e).
- Although almost all middle-class Indonesians have access to public health and education services, such services are often of low quality. Local public health facilities often lack the necessary equipment, for example, or lack staff with adequate training to provide basic care or key services. This is even the case in urban Indonesia, where most of the middle class live.

**BOX 4.2 A growing middle class with persistently poor access to quality public services: The case of Indonesia**

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evidence suggests it is possible to establish a new social contract with certain “co-responsibilities” to do just that—that is, by asking the middle class to contribute more through taxes that would, in turn, contribute to improving the very services that they demand. Recent experimental and quasi-experimental evidence (Mascagni 2016), including from Indonesia (Paler 2013), support the “fiscal exchange” hypothesis, which posits that there is a positive relation between tax revenues with public accountability and the quality of public spending. While international evidence suggests that such fiscal exchange might hold for specific services in different contexts, there is evidence from China, for example, that the middle classes have a high willingness to pay for the services that they consider among their highest priorities.

Sources: Mascagni 2016; Paler 2013; World Bank 2018e; World Bank, forthcoming[a].

a. These figures are based on a middle class defined as those households with per capita consumption equivalent to US$7.75 to US$38.00 per day (World Bank, forthcoming[a]).
countries as they seek to move from middle-income to high-income status. Most high-income countries have formal mechanisms for providing advance public notice about regulatory changes, provide opportunities for public feedback, and make information about existing regulations publicly available (World Bank 2017b). Although formal avenues for broad-based participation in regulatory decision making in developing East Asia are roughly comparable to those in middle-income Latin America, such opportunities are much more limited than in middle-income Europe and Central Asia or in high-income Organisation for Economic Co-operation and Development (OECD) countries (figure 4.6).

Consistent with the data on voice and participation, the people in developing East Asia believe that they have only limited ability to influence what their governments do. This view is captured in several waves of the Asian Barometer Survey (ABS), which highlights individuals’ perceptions about their participation and influence on government policies and actions between 2002 and 2015. The ABS asks respondents to react to several statements regarding participation and influence and to answer on a scale from 1 to 5, where 1 means “strongly disagree” and 5 means “strongly agree.”

Figure 4.7 presents the percentage of respondents who agreed or strongly agreed with the statement, “People like me don’t have any influence over what the government does.” Notably, in eight of the nine East Asian countries for which ABS data were collected in 2015, more than half of those surveyed...
agreed or strongly agreed that they have no influence. Moreover, in four of the nine countries, more than two-thirds of those surveyed in 2015 agreed or strongly agreed with the statement.

To address some of the challenges associated with voice and participation, several countries in developing East Asia have taken measures to try to increase opportunities for public input into policy-making processes, introducing institutional mechanisms for increasing citizen voice through public consultation, “notice and comment,” and voluntary compliance (Malesky 2018). The idea behind introducing consultation and notice and comment in the process of drafting regulations is that people’s voice can be integrated broadly into decision-making processes through an administrative process and, through that, policy makers can also gain valuable information about societal views and preferences. Nonetheless, questions remain as to whether administrative approaches to increasing voice are sufficient to meet forthcoming policy challenges as countries seek to transition from middle income to high income. Broad access to relevant information is essential, as is the opportunity for reasonably open debate, and mechanisms to ensure that citizen feedback is appropriately taken into account.

Transparency

Increasing transparency by improving access to key information related to government processes and decisions is a critical input into enhancing citizens’ participation and voice, whether within or outside a democratic electoral setting (Malesky 2018). Data indicate that several countries in developing East Asia still lag behind global comparators on transparency. In a composite index of civil service transparency from the Quality of Government Expert Survey (Dahlström and others 2015), experts rate countries based on several measures of transparency in bureaucratic decision making, including public access to government documents and records, the existence of an independent national audit office with educated and qualified staff, and adequate bureaucratic mechanisms for addressing misconduct on the part of public sector employees. The index shows significant variation in measures of bureaucratic transparency across the region (figure 4.8). Only the Philippines and Indonesia have transparency scores above the global average (captured by the dashed vertical line in figure 4.8).

The Open Budget Index (OBI), which measures access to accurate information about government spending and revenue collection, provides an alternative measure of
transparency (Seifert, Carlitz, and Mondo 2013). Figure 4.9 presents the OBI measures of government budget transparency in developing East Asian countries between 2006 and 2017 and compares country scores against global averages for each year.

As in the previous measure, Indonesia and the Philippines score well on budget transparency, above global averages, and with improving performance over time. Malaysia, Mongolia, and Thailand also have measures at or above the global average in 2017. Despite some improvements over the time horizon, Cambodia and Vietnam are still well below the global average, as is China, whose performance was basically flat over the period.

Against this background, several governments in the region are already taking initiatives to increase government transparency. China, Indonesia, Mongolia, Vietnam, and at least two states in Malaysia have passed freedom-of-information legislation. Malaysia is also working to expand regulatory transparency by bringing together all regulations and “notice and comment” on a single platform. Similarly, China’s Open Governance Initiative (OGI) mandates that a range of government documents (such as legal, normative documents; budgets; and land and infrastructure plans) be placed online at every level of government (Stromseth, Malesky, and Gueorguiev 2017). And Vietnam’s recently passed Access to Information Law, modeled after China’s OGI, contains provisions allowing citizens to request information not specifically outlawed and mandates that agencies reply within a specified time frame (Malesky 2018).

Information made available through transparency initiatives can make an important contribution to increased government accountability. As with voice and participation, however, transparency alone is insufficient to promoting accountability. Once information is made public, the effectiveness of transparency initiatives to promote government responsiveness ultimately depends on people’s ability to induce action in the policy arena. Government responsiveness is a function of the incentives for public officials to ultimately be accountable, whether through electoral or other mechanisms (World Bank 2017b).

**Accountability**

In addition to voice and transparency, the countries of developing East Asia face the challenge of strengthening government accountability. Accountability is most direct in contexts where citizens have the opportunity to reelect or vote public servants out of office. In other contexts, greater government accountability—and enhanced state effectiveness—may require strong institutional checks on the executive, including through legislatures (parliaments) and through independent judiciaries. These checks are important to avoiding capture and insuring against overtly self-interested decision making (Malesky 2018; World Bank 2017b).

Data indicate that legislative and judicial constraints on executive powers in developing East Asia are close to or on par with those of other middle-income countries—although, with one or two exceptions, they are still well below levels found in high-income countries (figure 4.10). There is also considerable variation across countries. Consistent with other measures of voice and accountability,
FIGURE 4.9  Transparency of budget information in developing East Asia, by country, 2006–17

![Graph showing transparency of budget information in developing East Asia, by country, 2006–17.]

Sources: Seifert, Carlitz, and Mondo 2013, as used in Malesky 2018.
Note: Figure shows Open Budget Index (OBI) scores for 9 out of 10 developing East Asian countries; OBI scores were not collected for Lao PDR. The OBI assigns countries covered by the Open Budget Survey (a project of the International Budget Partnership) a transparency score on a 100-point scale using questions that assess the amount and timeliness of budget information that governments make publicly available in eight key budget documents in accordance with international good practice standards.

FIGURE 4.10  Effectiveness of legislatures and judiciaries in providing checks on executive power in developing East Asia, relative to global country income groups, 2017–18

![Graph showing effectiveness of legislatures and judiciaries in providing checks on executive power in developing East Asia, relative to global country income groups, 2017–18.]

Note: The WJP Rule of Law Index data are based on a general population poll; legal professionals carried out the assessments. The index rates countries on a 0–1 scale, where 0 = most ineffective and 1 = most effective. Data are shown for 9 of 10 countries of developing East Asia; no data are available for Lao PDR. The dashed blue line represents the average score for lower-middle-income countries (LMICs); the dashed green line, the average for upper-middle-income countries (UMICs); and the dashed red line, the average for high-income countries (HICs).
Indonesia, Mongolia, and the Philippines perform relatively well on both legislative and judicial checks. Cambodia and Vietnam, on the other hand, fall below expectations on both measures, scoring lower than other lower-middle-income countries.

Institutional checks on executive power are referred to as “veto points” in the political science literature (Malesky 2018). Technically, veto points are defined as the number of actors that have a constitutionally enshrined ability to block policy changes. The idea is that the more actors that have a say over policy, the less prone the system will be to capture. The Polity IV project has developed summary measures of countries’ checks on executive decision making over time (Marshall, Gurr, and Jaggers 2017). The project’s data show that constraints to executive decision making have increased moderately in developing East Asia over the past two decades (figure 4.11). As a result, the region as a whole is now roughly on par with lower-middle-income countries in other regions, although it still has fewer constraints on government decision making than either upper-middle-income countries in other regions or in high-income economies. As with other measures of voice and accountability, the region’s countries exhibit substantial variation regarding both levels and trends in executive constraints. These patterns largely mirror those seen in figure 4.10 regarding legislative and judicial constraints (Malesky 2018).

While electoral systems and institutional constraints on executive powers are the most common mechanisms for promoting greater government accountability, they are not the only ones. Broad business coalitions can also play an important role in demanding accountability in government (World Bank 2017b). As noted in chapter 1, sound economic governance among “first wave” economies in East Asia was facilitated, in part, by mechanisms that established frequent and regular consultation between the government and business (Birdsall and others 1993). Media and civil society can also play a role, as can international agreements and institutions. Specifically, international conventions and treaties, as well as multilateral trade agreements, can serve as valuable (even if imperfect) commitment mechanisms for governments (World Bank 2017b).

Enhancing bureaucratic quality

Strengthening meritocratic hiring and promotion of staff in bureaucratic institutions—or what World Development Report 2017: Governance and the Law calls “robust public agency design” (World Bank 2017b)—can play an important role in strengthening countries’ institutional capacity to navigate the transition from a middle-income to a high-income, middle-class agenda. Meritocratic hiring and promotion can also play a valuable role in mitigating capture and increasing government responsiveness, if combined with appropriate accountability mechanisms in government and commitment to rules-based contracts (World Bank 2017b).

Data collected as part of the Quality of Government (QoG) Expert Survey indicate how countries in developing East Asia fare
on professional public administration and, in particular, the extent to which the region’s civil services are professional rather than politicized (Dahlström and others 2015). Drawing on the QoG Expert Survey data, figure 4.12 presents several dimensions of civil service professionalism in developing East Asia.

The data highlight both some accomplishments as well as ongoing challenges concerning the hiring and promotion of civil servants in developing East Asia. Figure 4.12 (panel a) captures the extent to which countries have professional and specialized civil services. Specifically, on the vertical axis, experts rank the extent to which hiring of civil servants in the region is merit based, on a scale from 1 to 7, with 1 being the least meritocratic and 7 being the most meritocratic. The horizontal axis of the panel a captures the extent to which civil service recruitment is open and selection competitive, again on a 7-point expert-ranked scale, with 7 being the most open and competitive. The dashed lines show the global averages for these indexes. Countries with highly professional and specialized civil services appear in the upper right-hand quadrant of the figure.

As the figure shows, developing East Asian countries generally do well on these metrics. By global standards, most countries appear to have highly professional civil servants based on meritocratic promotion criteria. Notably, the single-party regimes of China and Vietnam rank alongside countries with multi-party structures, such as Indonesia, Malaysia, and the Philippines. Several countries in the region have recently undertaken reforms to strengthen meritocratic hiring and promotion and, more broadly, to improve civil service performance (World Bank 2018c). Nonetheless, not all countries in the region perform well on meritocratic and competitive recruitment. Mongolia, Myanmar, and Thailand are all ranked by as having meritocracies that fall below the global average.

Figure 4.12 (panel b) highlights a more concerning side of civil services in developing East Asia, however—especially as countries aspire to transition from middle-income to upper-income levels. Here, the QoG Expert Survey ranked countries based on the importance of political and personal connections in recruitment, on the vertical and horizontal axes, respectively. Countries in which political and personal connections are more important
appear on the upper-right quadrant. Based on these measures, Cambodia, Lao PDR, Mongolia, and Vietnam perform worse than global averages, indicating that meritocracy in public administration in these countries is still tempered by personalism. In fact, all the countries in developing East Asia perform more poorly than the global average on at least one of these two dimensions.

The bottom line is that while meritocracy can provide some of the incentive effects associated with electoral accountability, if imperfectly implemented, it can infuse government decision making with relationship-based rather than merit-based criteria (Malesky 2018). In these cases, there is a risk that countries’ civil services can impede progress in making the transition from relationship- or deals-based systems to rules-based systems, a key political economy challenge for middle-income countries. This, in turn, can make it more difficult for governments to overcome capture in the economy and in policy making, hindering progress on necessary economic and social policy reforms.

**Financing the transition to high income**

As incomes continue to grow, another key challenge for governments in developing East Asia in meeting rising societal expectations is to find ways to finance their higher-income, increasingly middle-class agendas. This includes not only strengthening the availability and quality of basic services for those already in the middle class and those who aspire to be in the middle class but also, as discussed in chapter 3, investing broadly in (a) skills development, to ensure that people can participate productively in increasingly skills-intensive economies; (b) improved connectivity, to ensure that people can make the most of new and emerging technologies; and (c) strengthening social protection systems, to ensure that people who have difficulty transitioning to the new economy do not fall into poverty. To be able to finance this ambitious high-income, middle-class agenda, governments in developing East Asia will need to both raise more revenue and to spend more effectively.

Revenue mobilization is low in developing East Asia relative to both high-income countries and to low- and middle-income economies in other regions (figure 4.13). Some countries in the region have even seen their
Low revenue mobilization in developing East Asia largely reflects low tax collection. Although the countries vary considerably, weak tax performance in the region reflects several interrelated structural, policy, and institutional constraints:

- **Structural constraints** are largely a function of the difficulties of raising taxes in economies with large informal sectors and, historically, large shares of the population employed in agriculture. Remoteness in countries such as Indonesia and the Philippines that are large and dispersed, rapid migration from rural to urban areas, and poor understanding of countries’ tax systems have all been complicating factors, albeit to varying extents in different countries.

- **Policy constraints** involve a number of design features that have resulted in complex tax systems (World Bank 2017a). These include large exemptions associated with different types of taxes along with fiscal incentives for investors, including tax holidays, reduced tax rates, and investment allowances. In some contexts, the sheer accumulation of taxes, as tax systems have evolved over time, has resulted in great complexity. China, for example, had some 35 different taxes in the 1990s, many of which mobilized little resources. Recognizing this complexity, the Chinese government undertook tax simplification and, by 2016, reduced that number to 18 (Brondolo and Zhang 2016). Still, personal income remained taxed on the basis of a classification of 11 different types of income, each taxed at different rates, which provides incentives to taxpayers to select income categories with lower tax rates.

- **Institutional constraints** result from two main impediments: high tax administration costs and low tax compliance. The high costs of tax compliance are reflected in the complexity of the region’s tax systems and, often, a lack of transparency in the system. Indeed, several developing East Asian countries rank quite poorly in the Doing Business “ease of paying taxes” rankings (World Bank 2018b).

Cross-country evidence indicates that governments’ effectiveness in raising revenues generally increases as countries transition toward high-income status. “As economies develop, the number of formal market transactions tends to increase, population literacy improves, and government administrative systems become more effective. These advances, in turn, enable a widening of the tax base and an expansion of the set of feasible tax instruments (Gillis 1989)” (Bastagli, Coady, and Gupta 2015, 66). Ensuring that these advances materialize, however, involves deliberate and sustained policy action and institutional improvements, including through tax policy reforms, strengthening of countries’ tax authorities and related systems, and easing and improving tax compliance.

Source: Ruggeri Laderchi 2018.
along with strengthening taxpayer services and tax audit capacity, has contributed to raising revenues (World Bank 2018a).

- **In China**, significant reform efforts that began in the 1990s have included clarifications of the administrative structure, separation of the administration of national and local taxes, and creation of a new registration system unified between the local and national levels (Brondolo and Zhang 2016).

- **In Indonesia**, an e-filing system for the VAT has been introduced, while efforts are ongoing to gradually enforce e-filing of corporate income taxes and of withholding taxes from employees’ payrolls (World Bank 2018d).

- **In Vietnam**, efforts to address the perception of corruption and red tape complemented the implementation of new tax policies—including reducing the corporate income tax, simplifying the VAT regime (including reducing exemptions), and reforming the personal income tax to broaden the tax base—that have helped to stabilize and even raise revenue intake at a time when revenues were set to decline because of the abolition of cross-border taxes (OECD and ITC 2015).

Despite these steps, additional and deeper measures on both tax policy and tax administration will be needed if governments are to be able to finance high-income, increasingly middle-class agendas. Ensuring greater participation in and compliance with such reformed tax systems will also require greater government accountability for the quality of spending.

**Conclusion**

Countries in developing East Asia will face growing demands on state institutions as they work to transition from middle-income to high-income status. Designing and implementing sound economic policies will become increasingly challenging as the region’s economies grow and the world changes. As societies become increasingly middle class, policy makers will also face rising expectations about the quantity and quality of services their governments deliver. And these rising demands and expectations will occur in an increasingly complex political economy for reform. This chapter has examined several potential entry points for enhancing state effectiveness—through strengthening citizen voice and participation, increasing government transparency, enhancing accountability, and upgrading bureaucratic quality. It has similarly highlighted the importance of greater domestic revenue mobilization in financing the transition to high income. The related policy priorities are examined further in chapter 5.

**Annex 4A Description of data sources**

In analyzing institutions of the state, for some purposes it is useful to combine different data sources into an aggregate measure such as the Worldwide Governance Indicators (WGI), while for other purposes, the disaggregated underlying data are more useful. The World Bank has a range of tools to assess the quality of governance, including the Doing Business indicators that benchmark the regulatory environment, cross-country Enterprise Surveys to assess the investment climate, and the Public Expenditure and Financial Accountability (PEFA) indicators to measure the performance of fiscal institutions. A number of nongovernmental organizations (NGOs) also measure various dimensions of governance in other ways.

This chapter—and more broadly, this study—uses several indicators from multiple sources to inform the analysis of institutions and governance. The objective is to ensure robustness of the analysis of several dimensions of governance and to provide a comprehensive view. This annex briefly describes the governance-related datasets used in this study. The World Bank’s GovData360 initiative provides additional governance indicators at https://govdata360.worldbank.org/, which includes links and information on the most important governance indicators available from a variety of sources.
This study uses the following governance-related databases:

- **The Asian Barometer Survey (ABS)** is a large-scale, cross-country applied research program focused on gauging public opinion on issues related to political values, institutions, and governance in East Asia and South Asia. The survey collects a range of data on citizens’ attitudes and values including trust in institutions, social capital, political participation, citizen involvement, and government responsiveness. The ABS network encompasses research teams in 13 East Asian and 5 South Asian economies, and it administers surveys conducted under a common research framework and survey methodology with the aim of compiling reliable and comparable micro-level data on citizens’ attitudes and values. ([http://www.asianbarometer.org/](http://www.asianbarometer.org/))

- **The Bertelsmann Transformation Index (BTI)** is an index on institutions and governance created by Bertelsmann Stiftung, a private foundation with a mission to contribute to social reform. The BTI is a product of collaboration among 300 academics and country-based local reporters. It provides cross-country comparable data on political institutions, the market economy, and governance in 129 developing and transition countries. The data, updated every two years, measure the development of political and economic institutions including political structure, rule of law, civil society participation, market structure, and international cooperation. ([https://www.bti-project.org/en/data/rankings/governance-index/](https://www.bti-project.org/en/data/rankings/governance-index/))

- **The Open Budget Index (OBI)** measures citizen access to accurate information about government spending and revenue collection. Based on data from the Open Budget Survey (OBS) and carried out under the International Budget Partnership (IBP), the index seeks to provide an independent and comparative indicator of central government budget transparency. For countries that are covered, a transparency score on a 100-point scale is assigned using questions that assess the amount and timeliness of budget information that governments make publicly available in eight key budget documents and in accordance with international good practice standards. Data are currently collected on a biennial basis from 115 countries on six continents. ([http://www.internationalbudget.org/open-budget-survey/](http://www.internationalbudget.org/open-budget-survey/))

- **The Polity IV Project**, managed by the Center for Systemic Peace in Vienna, VA, collects and codifies data on the authority characteristics of states for the purposes of comparative, quantitative analysis. The dataset covers all major independent states between 1800 and 2015. The project collects data on a range of measures related to political institutions and processes, including the ways in which the executive is selected, the nature of and constraints on executive decision making, and the degree of political participation. It also records changes in the institutionalized characteristics of countries’ governing authority and produces annual assessments of states’ authority characteristics. ([http://www.systemicpeace.org/polityproject.html](http://www.systemicpeace.org/polityproject.html))

- **The Quality of Government (QoG) Expert Survey** is a unique dataset with information on the structure and behavior of public administration in 159 countries around the world. The database includes information on different dimensions of the quality of government, including professionalization, openness, impartiality, and politicization. The survey is run by the QoG Institute, which conducts and promotes research on the quality of government institutions and is located in the Department of Political Science at the University of Gothenburg, Sweden. The data are compiled on the basis of a web survey of 1,294 experts worldwide. ([https://qog.pol.gu.se/data/datadownloads/qogexpertsurveydata](https://qog.pol.gu.se/data/datadownloads/qogexpertsurveydata))

- **The World Justice Project (WJP)** is an independent, multidisciplinary organization working to advance the rule of law worldwide. The WJP produces the Rule
of Law Index, which measures the rule of law based on the experiences and perceptions of the general public and in-country experts worldwide. The WJP Rule of Law Index 2017–2018—based on more than 110,000 household surveys and 3,000 expert surveys in 113 countries and jurisdictions worldwide—presents a portrait of the rule of law in 113 countries based on eight factors: constraints on government powers, absence of corruption, open government, fundamental rights, order and security, regulatory enforcement, civil justice, and criminal justice. (https://worldjusticeproject.org/)

• The Worldwide Governance Indicators (WGI) project reports aggregate and individual governance indicators for more than 200 countries and territories between 1996 and 2017 on six dimensions of governance: voice and accountability; political stability and absence of violence; government effectiveness; regulatory quality; rule of law; and control of corruption. These aggregate indicators combine the views of a large number of enterprise, citizen, and expert survey respondents in high-, middle- and low-income countries. They are based on more than 30 individual data sources produced by a variety of survey institutes, think tanks, NGOs, international organizations, and private sector firms. (http://www.govindicators.org)

Notes

1. Measuring governance is difficult, and no single measure or indicator is perfect. To provide a comprehensive view and to ensure the robustness of the analysis, this chapter draws from a number of published and publicly available databases focused on governance and institutions. For brief descriptions of the data used in this chapter, see annex 4A.

2. For methodological details concerning the WGI, see Kaufmann, Kraay, and Mastruzzi (2010). For other information about the WGI, see http://www.govindicators.org.

3. Differences between countries that did and did not transition to higher-income levels are less distinct at the low- and lower-middle-income levels than they are once countries have reached upper-middle-income levels (World Bank 2017b).

4. The Bertelsmann Transformation Index (BTI), a project of Bertelsmann Stiftung, collects data on several dimensions of governance in 129 developing and transition economies, including on the extent to which governments enable civil society participation in deliberating on and formulating policies. Civil society participation is evaluated on a 10-point scale, where scores of 1–2 indicate no or limited space for civil society participation and scores of 9–10 indicate active support for civil society engagement in policy deliberations and formulation. For a brief description of the BTI, see annex 4A. For more information about the BTI, see https://www.bti-project.org/.

5. The Asian Barometer Survey (ABS) is an applied research program focused on gauging public opinion related to political values, institutions, and governance in 18 East Asia and South Asia economies. For a brief description of the ABS, see annex 4A. For more information, see http://www.asianbarometer.org.

6. More specifically, the index comprises six measures: (a) government documents and records are open to public access; (b) abuses of power within the public sector are likely to be exposed in the media; (c) citizens and media actors can track the flow of government revenues and expenditures; (d) the National Audit Office is independent from the government; (e) auditors at the National Audit Office have the appropriate education and qualifications; and (f) when found guilty of misconduct, public sector employees are reprimanded by proper bureaucratic mechanisms.

7. The OBI is a project of the International Budget Partnership. For a brief description of the OBI, see annex 4A. For more information, see https://www.internationalbudget.org/open-budget-survey/open-budget-index-rankings/.

8. This study refers to several waves of development in East Asia. The “first wave” refers to the so-called newly industrializing economies: Hong Kong SAR, China; Korea; Singapore; and Taiwan, China.
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Introduction

Policy makers in developing East Asia confront familiar as well as novel challenges as they navigate their economies through the coming decade. Wherever their countries currently are in the middle-income spectrum, they must find ways to address these challenges if they are to continue East Asia’s success in raising its people’s living standards into another decade. In some respects, the policy agenda includes familiar elements—current priorities that are fundamental to development and take on even more prominence going forward. In other ways, though, new approaches are needed that take account of both the changing world and the changing face of the countries themselves.

The evidence presented in this study suggests that, in many respects, what has become known as the East Asian development model—a combination of outward-oriented growth, human capital development, and sound economic governance—still has much to recommend it, both to the countries at the lower end of the middle-income scale and to those closer to high-income status. But, irrespective of countries’ levels of income and development, this strategy that has worked so well thus far will need to be supplemented and even modified in some ways if countries are to sustain high growth, ensure that development remains inclusive, and deliver on the rapidly rising expectations of their increasingly middle-class societies.

Although outward orientation and trade openness remain central to developing East Asia’s prospects, the basis for competitiveness and comparative advantage is shifting as trade patterns and technology change. But what it will take to remain competitive and to maintain or enhance comparative advantage in an era of slowing global trade and rapidly changing technologies will change. A focus on trading in goods, which has served the region exceptionally well in the past, will no longer be sufficient. Gaining comparative advantage in services that are now increasingly tradable, while finding ways to deepen regional and global value chains, will be critical. A broader view of innovation will be needed to facilitate enterprises moving to the technological frontier. And access to financial services must be expanded for small and medium enterprises (SMEs).

Human capital investments will also continue to be critical, but the nature of the skills that are needed for countries to succeed in the 21st century has changed. The demand for higher-order cognitive, socioemotional,
and technical skills has been rising over the past couple of decades. Changes in trade patterns and technological change increase the pace at which those skills will be needed across developing East Asia. Looking solely to rapid growth to support those who are less educated or whose skills have become redundant will not be sufficient given the economic forces at play. Countries will need to ensure that workers can acquire the skills required for success in this new economy. At the same time, for these transitions not to worsen economic inequality, countries will need to strengthen mechanisms to assist those who may be displaced and cannot adjust.

Designing and implementing sound economic policies, while providing the essential foundation for growth, must also be complemented by new directions in policy to address the growing complexity of these middle-income economies and meet the needs and expectations of their increasingly middle-class societies. Policy making in middle-income East Asian countries will be more complicated, in both its political and technical dimensions, than it was earlier in their development experience. So a greater burden will fall on the institutions of the state in several dimensions. The state must become more accountable to its citizens, allowing them greater voice and assuring more transparency. And governments must become more capable in delivering higher-quality public services that meet the needs of societies whose middle classes are expanding rapidly even while substantial numbers remain poor or economically vulnerable. The financing of this broad set of needs will be a particular challenge for the region’s governments.

The pace at which global and regional economic forces are evolving, particularly those affecting trade and technology, as well as the increasing economic diversity of the region’s population only increases the urgency for policy makers in developing East Asia. Unless they move quickly to respond to these shifts, they could miss the opportunities to continue their remarkable development experience. As always, action is needed on many fronts, and many priorities will be country specific as will the phasing of reforms. Nevertheless, several priorities relate especially to the challenges identified earlier in this report, and they apply across much of the region. These are the focus of this chapter.

The five pillars of the policy agenda

The policy agenda discussed in this report falls under five pillars:

1. **Boosting economic competitiveness** through reorienting trade policy, strengthening innovation, and broadening access to finance
2. **Building people’s skills** with emphasis on higher-order cognitive, socioemotional, and technical skills, including digital literacy
3. **Promoting inclusion** by supporting people’s economic transitions, improving access to digital technologies, strengthening social assistance, and using public spending to increase equity
4. **Strengthening state institutions** by promoting greater citizen voice and participation, increasing government transparency, strengthening checks and balances, and improving the quality of the bureaucracy
5. **Financing the transition to high-income status** by increasing domestic resource mobilization and strengthening countries’ tax administrations.

The discussion here distinguishes between emerging policy priorities and foundational policies. Emerging policy priorities are those reform areas that will require particular emphasis as countries strive to move from middle-income to high-income status. Foundational policies represent reform areas that developing East Asian economies have been pursuing for some time and that remain important to providing a solid basis for their sustained development. Navigating rapid technological change represents a cross-cutting challenge for policy but also an enabling factor. If embraced and managed, new technologies can provide additional impetus to efforts to promote productivity
growth, foster economic inclusion, and enhance state effectiveness. Table 5.1 summarizes the major policy recommendations of the report.

**Pillar 1: Boosting economic competitiveness**

Reversing the slowdown in productivity in many economies in developing East Asia requires that they redouble their efforts to become more competitive. This imperative is only heightened by the ongoing changes in global trade and technology. With trade growth slowing (particularly for goods), because of the maturation of global value chains (GVCs), it will be necessary to look for new opportunities. Technological changes imply that productivity increases will need to come from shifts in economic activity toward greater sophistication in production.

Efforts to boost countries’ economic competitiveness will need to focus on several areas of emerging priority for reform, including services sector reforms and deepening of trade agreements, broadening of innovation policies, and improved access to finance for SMEs. While focusing on these emerging priorities, it will be important that countries maintain attention on foundational policies that underpin economic competitiveness, including continuing efforts to improve the business climate, strengthen the regulatory environment, and strengthen the financial sector infrastructure.

**TABLE 5.1 Policy directions for a resurgent East Asia**

<table>
<thead>
<tr>
<th>Policy priority type</th>
<th>Boosting economic competitiveness</th>
<th>Building skills</th>
<th>Promoting inclusion</th>
<th>Strengthening institutions</th>
<th>Financing the transition to high income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emerging policy priorities</td>
<td>Reform services sector policies</td>
<td>Develop higher-order cognitive and socioemotional skills, including through technology-enabled learning</td>
<td>Expand employment services, including job search assistance and labor market information</td>
<td>Expand mechanisms for citizen voice and participation</td>
<td>Expand the tax base by introducing or expanding direct taxes, including personal income taxes, property taxes, and/or wealth taxes</td>
</tr>
<tr>
<td></td>
<td>Deepen trade agreements</td>
<td>Build continuous skills development systems, including TVET and lifelong learning programs, with close links to private sector employers</td>
<td>Broaden unemployment benefits</td>
<td>Increase government transparency</td>
<td>- Reduce tax externalities</td>
</tr>
<tr>
<td></td>
<td>Increase competition and lower entry barriers for provision of broadband</td>
<td>Enhance technical capacities and digital literacy</td>
<td>Integrate social protection systems linked to employment transitions</td>
<td>Strengthen accountability in policy making processes, including through internal checks and balances and regional and international agreements</td>
<td>- Reduce tax competition, including through regional cooperation</td>
</tr>
<tr>
<td></td>
<td>Attract private capital to expand broadband provision</td>
<td></td>
<td>Expand access to digital technologies and make them more affordable</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upgrade managerial capabilities</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Expand the scope of credit registries, including with online platforms</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Reform secured transactions systems</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundational policies</td>
<td>Improve business climate and reform regulatory environment</td>
<td>Strengthen learning outcomes in primary and secondary schools, including for lagging groups and regions</td>
<td>Reform generalized subsidies, such as those on food and fuel</td>
<td>Strengthen bureaucratic quality through meritocratic hiring and promotions and enhanced performance management, including via digital platforms</td>
<td>Simplify tax codes, including for corporate taxes and VAT</td>
</tr>
<tr>
<td></td>
<td>Strengthen financial sector infrastructure</td>
<td>Work progressively to universalize primary and secondary education, where relevant</td>
<td>Expand social assistance programs targeted to the poor and vulnerable</td>
<td></td>
<td>Strengthen tax administration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broaden access to university education</td>
<td>Reorient public spending to better promote inclusive growth</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: TVET = technical and vocational education and training; VAT = value added tax.*
Emerging priorities

Countries in developing East Asia have put in place trade policies that have fostered productivity growth as their economies have become increasingly outward oriented. Maintaining these open trade policies remains a priority for the region even as much of the rest of the developing world has moved in the same direction and despite the rise of protectionism in some high-income economies. Within this agenda, two aspects are now more important for the region: reform of services sectors and deepening of trade agreements.

Reforming services sectors

Although the specifics of such reforms will depend on the characteristics of the sector and country, two areas are likely to be broadly relevant. First, entry barriers into many services sectors need to be reduced and competition fostered. Some countries, including Malaysia and Thailand, have placed a priority on changing the ownership of services sector firms from public to private or from national to foreign investors, but they have retained limitations on new entry. These restrictions lead typically to a transfer of rents to the new owners, whether they are domestic or foreign firms, at the expense of consumers. The rationale for these restrictions is usually that unrestricted entry in sectors such as banking might threaten financial stability. However, such concerns are better addressed through effective prudential regulation rather than by restricting entry and competition. The largest benefits from services liberalization are associated typically with eliminating barriers to entry.

Second, the success of services sector liberalization, even more than in other parts of the economy, depends on putting effective regulations in place (Mattoo and Sauvé 2003). What form this regulation will take depends very much on the type of service being regulated. For instance, in financial and professional services, prudential regulations are key, while natural monopolies such as telecommunications and other network-based services require procompetitive regulation.

Although regulatory capacity is likely to be more limited in the region’s lower-income countries such as the Lao People’s Democratic Republic and Myanmar, global experience shows that regulatory design will be a challenge even for the wealthier countries of developing East Asia. Rapid changes in services technology and business models are making old models of regulation redundant. In communications, the disruption is through platforms like Facebook and WeChat; in financial services, by fintech companies like Ant Financial; and in transport, by ride-sharing companies like Didi Chuxing and Grab. These challenges suggest that services sector regulation is an area in which regional cooperation could enable a reduction of costs and a pooling of skills.

Another issue in designing appropriate services sector regulation is to find the right balance between (a) improving domestic standards sufficiently to export services and (b) not raising standards so high as to hurt domestic access to services or competitiveness in other markets. In the case of professional services, for example, low standards and disparities in domestic training and examinations can become a major impediment to obtaining foreign recognition, while standards that are too high may exclude some consumers and businesses from accessing these services.

One example of this dilemma was seen in the Philippines’ recent enactment of national privacy legislation to ensure continued access to the European Union (EU) data processing market. However, when this caused many Philippines-based U.S. firms to find it too costly to operate in the Philippines and to suspend new investment plans, the policy had to be reversed (Constantinescu, Mattoo, and Ruta 2018). Again, a regional approach could help countries create locally appropriate standards without segmenting markets while also increasing the region’s influence on the evolution of international standards in these areas.

Deepening trade agreements

Going beyond tariff reductions in trade agreements can help lengthen GVCs and boost trade in services. The priorities include better
protection of foreign investment and intellectual property rights; a more competitive environment through competition policies and regulation of state-owned enterprises; and easier movement of people and capital across borders. Such a policy environment will be even more relevant as developing East Asian countries aim not only to specialize in low-value-added tasks like product assembly but also to participate increasingly in the production of more sophisticated goods and services. Ongoing trade negotiations within developing East Asia and with the rest of the world will, therefore, have important consequences for the future of GVC integration and productivity growth in regional economies.

A recent “deep” trade agreement, which includes two developing East Asian countries (Malaysia and Vietnam) and nine other middle- and high-income Pacific Rim countries, is the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). It replaces the original Trans-Pacific Partnership (TPP) agreement following the withdrawal of the United States in early 2017. As the TPP had intended, the CPTPP eliminates the vast majority of tariffs while also reducing nontariff barriers by harmonizing regulatory practices (including on intellectual property rights, investment policies, and government procurement) as well as undertaking the mutual recognition of procedures on sanitary and phytosanitary standards and technical barriers to trade. It also includes trade facilitation procedures that are consistent with the World Trade Organization (WTO) Trade Facilitation Agreement.

Recent analysis shows that the CPTPP, although less beneficial than the original TPP because it excludes the United States, would have positive trade and income effects for both Malaysia and Vietnam (Maliszewska, Olekseyuk, and Osorio-Rodarte 2018). By 2030, Vietnam is expected to reap the largest gain from the agreement, with its gross domestic product (GDP) increasing by about 2.8 percent compared with the baseline without the agreement. In Vietnam, the sectors that potentially benefit the most from the CPTPP are food, beverages, and tobacco; wearing apparel and leather; and textiles, as well as most services sectors.

**Broadening innovation policies**

Policy makers in the region are rightly concerned about the possibility that unless dramatic actions are taken, the ongoing technological revolution will pass their countries by and the promise of higher productivity will go unrealized. This view, while understandable, is too extreme. Policy makers need not only to look at ways of promoting more rapid diffusion of digital technologies (“Industry 3.0”) but also to adopt a broader view of innovation policies.

Increased efforts are necessary, in particular, to expand access to digital technologies. While simple mobile technologies have spread widely across the region, access to the internet and to fixed broadband is much less common. Most of the population across developing East Asia is online, but they access the internet through mobile networks. Although this has brought benefits, particularly to consumers, the foundation of a digital economy is fixed broadband. Without accessible broadband, the innovations associated with “Industry 4.0” technologies, such as the internet of things (IoT), will not be feasible. Broadband access is lower and much more variable across and within countries, suggesting considerable scope for improvement. Also concerning is that broadband adoption among private businesses is low.

The fuller diffusion of broadband across people and businesses is therefore a priority to improve competitiveness. Doing so can ensure, on the one hand, that firms will be able to compete and innovate and, on the other hand, that aspiring entrepreneurs and labor market entrants will be able to better access markets, finance, and information on inputs, prices, jobs vacancies, and so on.

Two aspects are relevant here for policy. First, it will be necessary to reform sectoral policies to provide higher-quality, competitively priced broadband access. Regulations should be modified to provide incentives for existing and prospective providers to use the existing infrastructure more efficiently.
Particularly relevant in this regard are steps to promote the sharing of infrastructure to lower entry barriers and increase competition while also increasing providers’ ability to lease capacity on nondiscriminatory terms.

The second set of policy actions needed for fuller broadband diffusion would be to expand the provision of the broadband network itself. This will require that the sector be able to attract more private capital. Public-private partnerships offer one promising approach to doing this, including to deploy broadband networks into areas that might not otherwise be commercially viable. Malaysia, which currently lags in fixed broadband access (with only about a third of households having access and about the same proportion of businesses having a website), is considering many of these reform options (World Bank 2018a).

On innovation inputs, an important new policy direction in many countries is upgrading managerial practices. As stressed in Cirera and Maloney (2017), managerial capabilities matter for the efficacy of innovation investments: low managerial capabilities prevent firms from identifying productive opportunities, evaluating their feasibility, managing their risk, and allocating human resources. World Management Survey (WMS) data from the two countries in the region that the WMS covers (China and Vietnam) point to serious deficiencies in managerial practices in these countries.1 So policies designed to promote the upgrading of organization and managerial practices (such as management extension programs) should receive more emphasis in formulating innovation policies, particularly for countries far from the productivity frontier.

As indicated in the analysis of country performance on the Global Innovation Index (GII) in chapter 2, ongoing efforts to address gaps across much of the region in human capital, and particularly in education, need to be strengthened. Enhancing quality in these areas—including through measures such as training for innovative activities, acquisition and licensing of technology, and improved managerial practices—could boost innovation performance across the region.

**Improving SMEs’ access to finance**

Despite the deepening of domestic capital markets across much of the region, new policy approaches will be required to expand SMEs’ access to finance, especially for investment. Many elements of the traditional approach to providing SME finance—which has relied on setting up state-owned banks or specialized institutions, imposing lending requirements, or capping interest rates—have not been successful. The most promising options attempt to address more directly the reasons that SMEs cannot access finance, including the lack of available information about SMEs or the limited collateral they have to offer potential lenders.

Two such innovative schemes are particularly relevant. Each also highlights the potential that digital technologies and platforms offer in improving SME access to finance. The first is to expand information-sharing mechanisms such as credit registries and credit bureaus, which collect and disseminate information about borrowing by SMEs.2 These mechanisms have expanded worldwide over recent decades. Whereas in the 1980s only a handful of economies had credit reporting institutions in place, as of 2013, more than 70 percent of economies had a credit registry, and more than 80 percent of them had a credit bureau (World Bank 2013). According to the World Bank’s Doing Business index, in developing East Asia in 2018, credit registries and bureaus covered, respectively, about 32 percent and 26 percent of all individuals and firms.3 The coverage of credit registries in East Asia is significantly higher than in Latin America and in Europe and Central Asia. On the other hand, the region’s credit bureau coverage is much lower than in these two other developing regions.

Increased coverage by such credit reporting institutions has been found to significantly reduce the financing gap between large and small firms (Galindo and Micco 2010).
In economies with credit registries, SMEs get a higher share of bank financing, while credit bureaus benefit younger firms more (Love and Mylenko 2003). Furthermore, the use of credit scores for small businesses helps increase loans to financially constrained small firms (Berger, Frame, and Miller 2005).

The use of online data to assess the creditworthiness of firms can complement credit bureaus and registries. Such data can help cover SMEs that lack a credit history. When firms conduct business on online platforms, the information that is produced can be used to evaluate the performance of firms, including by financial and nonfinancial institutions that are considering lending to them. The e-commerce platform Alibaba in China, using its financial arm Ant Financial, has implemented an example of such an initiative. Since 2007, Alibaba has offered microcredit to SME vendors on its platforms. To evaluate borrowers, Alibaba relies on all the information collected on vendors’ activities, including sales and payment processing records. In 2009–14, Alibaba provided more than $32 billion in loans to more than 800,000 SMEs (IOSCO 2014).

The second innovative approach to improving SMEs’ access to finance focuses on broadening collateral that lenders can use to offset the risk of default. SMEs often lack sufficient immovable assets that can serve as collateral, while the legal framework often does not allow the use of movable assets (such as accounts receivable or machinery) as collateral. This has led countries to reform their secured transactions systems to allow these assets to be used as collateral. For instance, collateral laws could be updated to explicitly define which movable assets can be used as collateral and to establish enforcement mechanisms. These could be complemented with centralized, electronic collateral registries for movable assets. Although analysis is limited about the impacts of such secured transactions system reforms in low- and middle-income countries, the available evidence points toward a positive impact on firms that can use movable assets (Calomiris and others 2017; Campello and Larrain 2016; Love, Martinez Peria, and Singh 2016).

Several economies in East Asia have modernized their secured transaction systems since the 2000s, including Cambodia, China, Indonesia, Lao PDR, the Philippines, and Vietnam. China’s experience stands out. In 2007, China introduced a new property law that unified the various laws that dealt with various aspects of property ownership, expanded the menu of movable assets that could be used as collateral, reformed the enforcement process, and set up a centralized registry for movable assets. The reform of the secured transaction system had a positive effect on SME finance in China. The number of loans collateralized by movable assets grew by more than 20 percent in 2008–10 after having stagnated before the reform (Dalberg 2011; IFC 2012).

**Foundational policies**

*Improving the business climate and reforming the regulatory environment*

While focusing on emerging policy priorities, it will be important that countries continue to enact foundational measures that underpin their economic competitiveness. To increase productivity growth and spur innovation, it is necessary to ensure a vibrant and competitive business climate, which is also among the most important “analog complements” to enable the digital economy.4

Moreover, the emphasis on the business climate and the regulatory environment is consistent with the need for a broad view of innovation policy and to invest in missing complementary factors (Cirera and Maloney 2017). The analysis in chapter 2 of where various regional economies rank on the Global Innovation Index showed that most countries fall short on the Institutions pillar of the GII, within which the gaps are most marked for the regulatory and business environment. Measures to address these shortfalls can be expected to increase the returns to innovation.
Strengthening financial sector infrastructure
To improve access of SMEs to finance, it is also critical that key elements of the financial infrastructure be improved. In particular, identification systems, insolvency and creditors’ rights regimes, accounting and auditing requirements, and retail payment systems are all relevant aspects. In many of these areas, economies in developing East Asia are implementing reforms that can help underpin improved access of SMEs to finance. For instance, the Philippines is implementing a national retail payments strategy to facilitate access and reduce the cost of low-value payments, elements of which would be expected to benefit SMEs disproportionately.

Pillar 2: Building skills
Ongoing technological changes and shifts in trade patterns often raise the specter of a jobless future, including in developing East Asia. What is more likely, however, is that the nature of work is going to change with time. Some jobs may disappear, but others will evolve, and still others—new types of work—will be created. Moreover, an increasing share of jobs will likely require a broader range of advanced skills than in the past. Success in navigating this future will, thus, require countries to support development of more-advanced skills among their populations. Building these skills broadly across countries’ socioeconomic groups will be important both to future productivity growth and to ensuring that growth is inclusive.

Emerging policy priorities in this area include developing higher-order cognitive and socioemotional skills among current and future workers, building continuous skills development systems to enable lifelong learning and skills upgrading, and enhancing people’s digital and technical capabilities.

Success in developing higher-order skills will require that people have strong basic skills. As such, it will be important for the region’s policy makers to remain focused on foundational policies to ensure broad schooling access, educational quality, and enhanced learning outcomes.

Emerging priorities
Developing higher-order skills
Changes in technology mean that work in the 21st century increasingly requires skills beyond basic numeracy and literacy, important as those will remain. Countries in developing East Asia will increasingly need to emphasize high-order cognitive as well as socioemotional skills to ensure that workers are productive and competitive in their changing economies.

As with basic cognitive skills, development of socioemotional skills needs to start early. Indeed, socioemotional learning starts in early childhood and is shaped by the same family and environmental factors—health, nutrition, and early stimulation—that affect other dimensions of children’s readiness to learn. Socioemotional, as well as other higher-order skills, can then be further developed over the life cycle (Bodewig and others 2014; World Bank and DRC, forthcoming).

A growing number of countries have recognized emerging skills needs and are putting greater emphasis on problem solving, creative thinking, socioemotional, and other higher-order skills, as in the following examples (World Bank and DRC, forthcoming):

- In the Republic of Korea, the 2015 Revised National Curriculum aimed to nurture a “creative and integrative” learner by promoting socioemotional competencies, knowledge-information processing skills, creative thinking skills, communication skills, and civic competency by integrating liberal arts and natural sciences tracks in high schools.
- In Singapore, the traditional focus on academic performance is shifting toward a “positive education” model focused on skills that will assist students in strengthening their relationships, building positive emotions, enhancing personal resilience, promoting mindfulness, and encouraging a healthy lifestyle.
In Finland, the new national core curriculum introduced collaborative classroom practices that are multidisciplinary as well as problem and project based. Students are expected to participate more actively in the learning process, including in the development of the curricula and in devising their own learning goals, while teachers’ role is then to provide an enabling learning environment and support students in achieving their individual study plans.

Because technology and related labor market changes are likely to occur faster than traditional country education systems can adapt to them, it will also be important for countries in developing East Asia to explore innovative approaches to learning and skills development. Digital technology may provide some important solutions through technology-enabled learning.

Although there is little rigorous evaluation to date of online learning tools or adaptive learning software, several adaptive learning platforms are already available in the region and show some promise. In China, for example, Yuanfudao offers online courses inspired by the Khan Academy (as well as a test data pool uniquely adapted to China’s testing system); TutorGroup offers connections anytime anywhere to synchronous tutoring with a live tutor; and Kidaptive, a cloud-based adaptive learning platform, enables creation of learner profiles and actionable feedback for parents and teachers (World Bank and DRC, forthcoming).

Although technology-enabled learning tools generally come from the private sector, there is considerable scope for public-private partnerships to identify and maximize the complementarities between traditional and new learning modalities. Making the most of new learning technologies will also benefit from regular evaluation, based on which the most effective approaches can then be scaled up.

Building continuous skills development systems
As technology changes and employers’ skills needs become increasingly sophisticated, it will be important that countries build skills development systems to enable learning and skills upgrading for people over their entire working lives. With rapid technological change, opportunities for periodic skills upgrading will become increasingly important for current workers—for both productivity and inclusion reasons. Multiple job transitions throughout people’s working lives may also increasingly become the norm in developing East Asia, as they have in high-income economies. For these reasons, systems of lifelong learning will become increasingly important to ensure workers are prepared for the expected impact of technological changes on the labor market.

Technical and vocational education and training (TVET) programs can play an important role as part of countries’ broader skills development strategies, as can other programs that support lifelong learning. To be effective, such programs must have greater market relevance and be more closely linked to the private sector than in the past. Successful systems will, thus, require close coordination and partnership between government agencies and the private sector.

Effective public-private partnerships to foster enterprise leadership in curricular design, delivery, and practical training have been built in several countries, including through the Meister Schools in Korea and through the German apprentice system (World Bank and DRC, forthcoming). In the United Kingdom, as well as elsewhere in Europe, sector employer councils have been set up to foster close partnerships with the private sector. And, some East Asian countries have established independent apex training authorities, as with Singapore’s Institute for Technical Education. Governments still need to provide oversight, however, by monitoring program quality, encouraging accountability, and by ensuring a results orientation in government financing.

Notably, relatively little rigorous impact evaluation has been carried out on adult training and skills development programs in developing East Asia. Studies from the Organisation for Economic Co-operation
and Development (OECD) and other middle-income regions (especially Latin America) help shed some light, however. For example, training programs are more likely to have a positive effect on post-program employment than on earnings (Betcherman and Moroz 2018). Studies also show that positive impacts are larger when training is adapted to actual labor market needs. Combining on-the-job training with classroom training has also been found to be more effective than classroom training alone (Kluve 2016). Linking training with formal qualification systems also seems to help, especially where employers are actively involved in determining the qualification framework. Although international findings provide some useful guidance, it will be important for the region’s countries to evaluate their training programs to ensure they are having the desired impacts, especially in the face of rapidly changing economic circumstances.

**Enhancing people’s digital and technical capabilities**

Demand for higher-order technical skills—including the knowledge and ability to use information and communication technologies (ICTs)—is increasing rapidly in middle-income countries around the world (World Bank 2016). Developing East Asia is no exception. Indeed, employers across the region report that it often is difficult to find employees with the requisite technical skills (Mason, Kehayova, and Yang 2018).

As technologies change, there will likely be a growing need for specialists able to develop, operate, and maintain ICT systems. At the same time, countries will also need to ensure that their populations have basic digital literacy as well as the knowledge and ability to use digital business tools and applications. Such knowledge will have important implications for productivity and inclusion. Recognizing this led the government of Malaysia in 2015 to initiate its eRezeki and eUsahawan programs to promote greater involvement in the digital economy among youth; micro-, small, and medium-size entrepreneurs; and those in lower-income communities (box 5.1).

**Foundational policies**

**Strengthening basic learning outcomes**

Despite much of developing East Asia’s success in increasing access to education, learning outcomes in many countries, whether at the national level or among specific sub-populations, still lag. Almost 60 percent of students across the region lack the necessary foundational skills, let alone skills that will be needed to compete and succeed in increasingly skills-intensive, technology-driven environments (World Bank 2018b). Many of those with the largest deficiencies are those at the bottom of the income distribution or disadvantaged in other ways. Although access to education, including to tertiary education, has been improving across the region, poor students still confront lower-quality education and systematically poorer learning outcomes.

Education systems across developing East Asia will, therefore, have to ramp up their efforts to increase educational quality and learning. Drawing lessons from Japan, Korea, and Singapore along with other high-performing education systems in East Asia and beyond, a recent World Bank report, Growing Smarter: Learning and Equitable Development in East Asia and Pacific, argues that to strengthen learning outcomes and thus foundational skills, national education systems in developing East Asia should focus on the following (World Bank 2018b):

- Aligning institutions and systems to ensure that the basic conditions for learning, including curricula and broad access to educational materials, are in place
- Strengthening teacher selection and preparation to improve the quality of teaching
- Providing adequate public spending for basic education and learning, including sufficient funding of schools and districts in disadvantaged settings
- Emphasizing child readiness to learn, including through support to early childhood health and nutrition and increased
In 2015, the Malaysian government launched the eRezeki and eUsahawan initiatives to facilitate the greater inclusion of such groups as youth; micro-entrepreneurs, digital entrepreneurs, and the bottom 40 percent of the income distribution (B40) in the digital economy. The objective of the eRezeki initiative is to provide opportunities to members of B40 communities to earn additional income by leveraging digital technologies. The eUsahawan initiative is a digital entrepreneurship program intended to mainstream digital entrepreneurship education among emerging and current microentrepreneurs using a community-centric approach.

**eRezeki**

The eRezeki initiative has three major strategies:

- **Identify and establish collaboration between local and international digital platforms** to secure and channel various tasks or work that Malaysian workers can perform. These fall into three categories: simple digital microtasks, digitally enabled tasks, and digital work.

- **Conduct outreach to targeted communities to profile workers** and match them to suitable work. The participants collaborate with participating partners’ platforms to start performing the tasks and thereby to earn income.

- **Provide an intermediary platform to link participants with work** aggregated from local and international platforms through an open application public interface (API).

In addition, Malaysia’s Global Online Workforce program—an offshoot of the eRezeki program—has been introduced to prepare the country’s workforce to respond to the global trend toward the increased use of independent contractors or freelancers.

**eUsahawan**

The eUsahawan program focuses on improving educational services, particularly related to digital entrepreneurship, because a lack of skills in this area is one of the most significant causes for Malaysia’s digital divide. Through the program, a structured digital entrepreneurship curriculum is being rolled out through public tertiary education institutions, including TVET colleges and higher-learning institutions, and through entrepreneur development agencies. The initiative targets students and microentrepreneurs, covering key digital technology trends that are reshaping businesses today, including social media marketing, mobile commerce, analytics, e-payment, and digital advertising.

A network of educational institutions and strategic partners has been established to strengthen the eUsahawan ecosystem. The eUsahawan curriculum is integrated into the official curriculums of 19 educational institutions, with lecturers at these institutions being trained as eUsahawan trainers and enabled to teach both enrolled students and microentrepreneurs. eUsahawan collaborates with 63 strategic partners to scale up initiatives such as advisory services, outreach efforts, onboarding, trainer mobilization, training implementation, and training facilities.

Since 2015, more than 160,000 students and microentrepreneurs have passed through the eUsahawan program. Out of these, approximately 30 percent of participants have reported generating additional sales totaling more than RM 320 million over a period of three to six months.

**Further broadening education access**

Countries in developing East Asia have made tremendous strides in making primary and secondary education available to their populations. Despite significant progress, however, universal primary and secondary school is still not a reality in much of the region. Universal primary and secondary education will be essential to ensure that people have the basic skills needed to be productive and successful in the region’s labor markets.

As countries strive to transition from middle-income to high-income status, it will be important to continue expanding access to education and, in particular, to achieve universal primary and secondary education.
In addition, efforts to broaden access to and raise the quality of university education—already under way in much of the region—will be increasingly important to ensure that workers are productive and competitive in rapidly changing economic circumstances.

**Pillar 3: Enhancing inclusion**

There is growing concern across the region about rising inequality in outcomes and opportunities. This is reinforced by the pace of economic change, which could imply that those with less-advanced, less-marketable skills may have trouble finding employment in a changing labor market. Also, despite developing East Asia’s success in reducing poverty, many remain vulnerable to a range of economic shocks, and their exposure is likely to be even greater in a world undergoing rapid technological change. It will, therefore, be important for governments in the region to put in place stronger, more nimble systems of support to protect workers who have difficulty adjusting to new and emerging economic circumstances.

In addition to supporting the development of 21st-century skills, discussed above, emerging policy priorities include strengthening employment support services that assist workers displaced by technological change and trade liberalization, broadening unemployment benefits tied to economic transition, and making digital technologies more affordable and accessible.

Several areas of foundational reform will also remain important to fostering inclusive growth and thus warrant policy makers’ attention. These include reform of generalized and inefficient subsidies, expansion of social assistance programs that target the poor and vulnerable, and reorientation of public spending to promote equity.

**Emerging priorities**

*Expanding employment support services*

As the pace of economic change accelerates with shifting trade patterns and technological change, some workers will have difficulty adjusting to changing circumstances. Those who are older, economically vulnerable, or less educated are among those most likely to be affected by economic changes. Several countries in developing East Asia—including Cambodia, China, Indonesia, Malaysia, Mongolia, the Philippines, and Vietnam—already provide some form of employment services, although the range and accessibility of these services tend to be limited (Betcherman and Moroz 2018). Expanding the coverage of employment services is thus important.

Like skills development and training programs, employment services are a form of active labor market programs (ALMPs) that link beneficiaries with income-generating opportunities that are intended to reduce vulnerability. Examples of such services include job search assistance (including counseling and job placement services) and provision of labor market information.

Interest in such services is relatively recent in developing East Asia. Nonetheless, these types of services can provide a worthwhile complement to the usual process of job searching and matching based on networks of family and friends, which disadvantage poor and vulnerable workers. The relevance of such programs is likely to be greater in economies with higher shares of wage earners and greater administrative capacity. Nonetheless, countries with less capacity could focus more on “core” employment services, including information on overall job market conditions and vacancies and on providing basic job search assistance and placement services.

Countries with greater capacity and more formal labor market structures could consider providing “extended” services, including links to training and skills development programs and to unemployment assistance or insurance (Betcherman and Moroz 2018; Mazza 2017). Indeed, evidence suggests that integrated packages of services tend to be more effective than single interventions (World Bank, forthcoming). Development of partnerships with private placement agencies should also be considered, including the use of job placement- or results-based payment systems.
As with other types of ALMPs, evidence on the effectiveness of employment support programs is limited in middle-income settings, including in developing East Asia. Most evidence comes from high-income settings. Nonetheless, employment services have usually been found to be cost effective, with positive impacts on employment outcomes (Betcherman and Moroz 2018). Information and counseling and placement assistance, in particular, are low-cost interventions that can improve employment and earnings (Brown and Koettl 2015; Card, Kluve, and Weber 2015). Moreover, digital technologies (including smartphone-based applications) can reduce the cost of extending labor market information and employment support even further, while helping to improve the quality of matches between workers’ skills and employers’ needs.

**Broadening unemployment benefits**

Although unemployment in most developing East Asian countries has been low historically, evidence from Indonesia and Vietnam suggests that new technologies are often labor saving (Darko and Viollaz 2018; Poole and Santos-Paulino 2017). Continuing shifts in trade, rapid technological change, and associated changes in labor demand may raise the risks of some workers with outmoded skills becoming unemployed and, if unprotected, they could fall into poverty. Measures to cover individuals and households against idiosyncratic risks (such as those associated with technology-related employment shocks), or to protect people from poverty have been relatively limited to date in developing East Asia. This is reflected in the low spending (as a share of GDP) on social protection in the region (as shown in chapter 3, figure 3.18).

Some countries have made efforts to expand poverty-targeted social assistance programs, as in China (Dibao, a minimum income guarantee program); Indonesia (Program Keluarga Harapan [PKH], a conditional cash transfer program); and the Philippines (Pantawid Pamilya Pilipino Program [4Ps], a conditional cash transfer program). However, overall coverage of social safety net programs in the region remains lower than in some other middle-income regions (see chapter 3, figure 3.19). Where social insurance programs have been put in place, they have tended to focus on access to services such as health care (for example, in Thailand) or for specific groups in the population, such as the elderly, as opposed to those affected by employment shocks or economic transitions.

Unemployment insurance is relatively new in developing East Asia. The traditional approach to dealing with unemployment has been through severance programs. At present, China, Mongolia, Thailand, and Vietnam have active unemployment insurance schemes. Malaysia introduced unemployment insurance in 2018, with full implementation scheduled to start in 2019. The Philippines is considering implementing a program, and Lao PDR and Myanmar have legislation providing for unemployment insurance, although these have not yet been implemented (Betcherman and Moroz 2018).

A common feature of existing unemployment insurance schemes in the region has been to link unemployment insurance to ALMPs such as employment services, following the Korean model. Unemployment insurance in the region also tends to have low contribution and benefit levels. Because of the high incidence of labor informality across much of the region, coverage also tends to be low. Only one country in developing East Asia, Mongolia, covers self-employed workers on a voluntary basis, similar to Korea.5

Traditional concerns about unemployment insurance revolve around its effect on people’s incentives to work, especially if the benefits are large or program durations are long. Cross-country experience indicates that when unemployment benefits are modest and their duration short, as in developing East Asia, unemployment insurance has positive net benefits, particularly relative to severance programs (Betcherman and Moroz 2018).

A bigger concern in the face of changing economic circumstances in the region is low unemployment insurance coverage and the relatively poor protection against poverty if workers lose their jobs because of technology...
or trade. Thus, countries might consider developing or expanding unemployment insurance systems to cover the self-employed. These could also be linked to an expanded and strengthened system of social assistance, to ensure that workers who cannot make the skills transition do not fall into poverty (as further discussed within the “Foundational policies” section below).

Development of such integrated and “adaptive” social protection systems can be enabled using existing digital technologies. Several countries in the region, including China, Indonesia, and the Philippines, already have information technology (IT)-enabled social registries that capture information about people’s demographic and welfare status, help validate program eligibility, and confirm delivery of the appropriate benefits. Over time, these registries could be used to link programs, facilitating development of an integrated social safety net that is adaptable, based on people’s changing welfare status, and designed to appropriately account for work incentives.

**Making digital technologies widely accessible and affordable**

Improving affordable access to digital technologies for those who still lack such access will also play an important role in fostering inclusion—through helping people access real-time weather and price information, access markets, purchase consumer goods, engage in mobile banking, and, when needed, receive social benefits. Despite rapid growth in access to mobile-phone and internet technology across developing East Asia, many still lack access, especially to broadband internet. Broad and affordable access to digital technologies thus remains an important pending agenda across the region. Moreover, poor and vulnerable populations as well as those living in rural and more-remote areas still have systematically less access to digital technologies than those living in urban centers.

Global evidence indicates that efforts to promote market competition, private investment, and independent regulation have generally been effective in extending coverage and making digital technology access affordable (World Bank 2016). Regulatory reforms that enable market competition and ensure a level playing field for operators will thus be important to ensuring that digital technologies are both broadly available and affordable, even in far-flung corners of the region. At the same time, there is evidence of market failure impeding the development of digital infrastructure, especially in countries’ rural and more-remote areas. Even where it is technically viable to serve remote communities or sparsely populated areas, there may be little commercial incentive to do so, given the costs and expected returns. Even where providing basic services is commercially feasible, delivering more-advanced networks suitable for carrying data services, such as high-speed internet, may not be economical.

To address these challenges, governments around the world have tried a variety of approaches to extending digital infrastructure. These have included, for example, the establishment of Universal Service Funds that channel payments by operators to fund rural infrastructure and the licensing of mobile and internet service providers where these licenses include specific network rollout obligations (World Bank 2016). Infrastructure sharing arrangements—in which operators share one another’s network infrastructure (or at least some elements of it)—have also shown some promise, as has “mutualization,” a contractual arrangement in which wholesale operators are created to sell only to other operators, not directly to users.

Interventions aimed at making digital services available in poor, rural, and remote areas are continuing to evolve. Given the increasing importance of digital technologies to inclusion in developing East Asia, it will be important for countries to continue to identify, evaluate, and share effective solutions to making digital technologies broadly and affordably available.

**Foundational policies**

**Reforming generalized subsidies**

Several countries in the region still have “indirect subsidies” (from setting consumer prices of goods and services artificially low) on
products such as fuel and food. While typically justified because they are seen to support redistributional objectives, these subsidies typically benefit households in the upper part of the income distribution. In Indonesia, for example, a fifth of the government budget (4 percent of GDP) was spent on energy subsidies, which was about four times the amount spent on social assistance. Only about a third of these subsidies reached the poor and vulnerable, far lower than the benefits that flowed to the poor from Indonesia’s biggest social assistance programs (World Bank 2018d). Following extensive fuel subsidy reforms in 2015, these subsidies fell to about 0.7 percent of GDP in 2017.

Expanding social assistance programs
As discussed in chapter 3, both spending on and coverage of targeted social assistance programs are low in developing East Asia relative to other middle-income regions. A recent World Bank study, *Riding the Wave: An East Asian Miracle for the 21st Century*, highlighted the importance of a well-targeted and adequately resourced social assistance system as part of developing East Asian countries’ strategies to ensure that growth is inclusive (World Bank 2018e). Given the changing economic environment, targeted safety net programs are important not only to protecting the current poor and vulnerable populations but also to ensuring that those who have difficulty adjusting to new realities are protected from becoming poor.

Reorient public spending to promote inclusion
It will also be important to reorient spending toward expanding public services, such as education and health, that promote greater equality of opportunity among the poor and vulnerable. Such spending has already had a positive distributional impact in Indonesia and Vietnam (Ruggeri Laderchi 2018), and there continues to be scope to expand such spending in other countries as well. Public spending on education and health services can be equality enhancing in the short term, while contributing to greater equality of economic opportunity over the longer term.

Spending on primary and secondary education, as opposed to the tertiary level, will be most effective in promoting greater equality of opportunity. Moreover, it will be increasingly important to focus on spending not only to increase service access but also to improve service quality. It is critical that greater spending on education, for example, translate not only into higher enrollment rates but also into better learning and skills outcomes (World Bank 2018d).

In principle, savings from reduced spending on generalized subsidies could cover much of the costs of financing the increased spending on the inclusion agenda, including on protection against employment shocks; expanded employment services; broad, affordable access to digital technologies; enhanced social assistance; and more equitable public service provision. Enhanced provision and access to digital technologies can also play a role. Indeed, well-targeted, IT-enabled interventions in social protection, labor, and digital connectivity can be particularly cost effective in fostering inclusive growth.

Pillar 4: Strengthening institutions
As countries in developing East Asia seek to transition from middle-income to high-income status, the governance challenges they face will be broader and deeper than at earlier stages of development. As countries’ economies become more sophisticated and more complex—and as the global economic and technological environments change—there will be a higher technical bar for sound economic policy making. As countries seek to build increasingly affluent, middle-class societies, they will need to further develop state capacity as they face increasing demand for the delivery of more and better-quality services. Moreover, countries will face new political economy challenges in sustaining past success. Reducing the risk of policy capture, enabling the formation of broad-based coalitions that favor inclusive growth, and facilitating the transition to rules-based governance
will all be important. Shifts in global trade and rapid changes in technology just add to the urgency of addressing these challenges.

Strengthening voice and accountability will be central to addressing these governance challenges. Three emerging areas for reform will be particularly important: expanding mechanisms to promote citizen voice and participation, increasing government transparency, and strengthening the systems of checks and balances. Foundational policies to strengthen bureaucratic quality will also be critical to ensuring that governments’ capacity to design and implement policies can meet rising societal expectations.

Emerging priorities

**Expanding mechanisms to promote citizen voice and participation**

Given the limited avenues for participating in policy and regulatory decision-making processes, there remains considerable scope for countries in developing East Asia to strengthen people’s voice. Enabling policy-making processes to be more inclusive will be key to avoiding policy capture. Greater voice and participation can contribute to more durable reform coalitions, strengthen policy formulation, and lead to more sustainable policy reforms.

To date, several countries in developing East Asia have taken measures to try to increase opportunities for public input into policy-making processes. China and Vietnam, for example, have introduced institutional mechanisms for increasing citizen voice by introducing public consultation, “Notice and Comment,” and voluntary compliance (Malesky 2018). The idea behind introducing consultation and Notice and Comment in the process of drafting regulations is that people’s voice can be integrated broadly into decision-making processes through an administrative process and, through that, policy makers can also gain valuable information about societal views and preferences.

Indeed, China and Vietnam now subject hundreds of draft laws and regulations to public review each year, at both the national and provincial levels. During the policy consultation period, the government publicizes policy proposals, and citizens weigh in, often in a critical fashion (Horsley 2009). Evidence from both countries suggests that consultation on legislation and regulatory drafting has increased voluntary compliance (for example, reduced labor disputes) and improved firms’ perceptions of the respective government’s regulatory legitimacy (Malesky and Taussig 2017a, 2017b). Laws and regulations that undergo consultation are substantially less likely to be repealed or amended, indicating that learning contributes to policy stability (Gueorguiev 2014). In China, the positive impacts of public consultation appear to be most salient among otherwise marginalized groups (Truex 2014). There is also evidence that increased public participation through Notice and Comment has helped to reduce corruption (Stromseth, Malesky, and Gueorguiev 2017).

Nonetheless, questions remain as to whether administrative approaches to increasing voice are sufficient to meet forthcoming policy needs and challenges as countries seek to transition from middle-income to high-income, especially if accompanying accountability mechanisms are weak. For consultation to be effective, there must be reasonably open debate, and policy makers must be prepared to tolerate and, when appropriate, take on board critical feedback. In fact, while public consultation and Notice and Comment have helped increased social acceptance of legislation, it is less clear as to how much they have influenced the content and quality of public policy. Moreover, relying on a single mechanism to contribute to policy processes may be insufficient. World Development Report 2017: Governance and the Law argues that “all expressions of citizens’ collective action, including voting, political parties, social movements, civic associations, and other less conventional spaces for policy deliberation, are imperfect” (World Bank 2017b, 25). As such, it may be important that the region’s governments provide opportunities for citizens to give voice through multiple mechanisms.
Increasing government transparency
A critical input to effective citizen voice and participation is accurate, accessible, and actionable information. This includes public access to government documents (for example on existing or proposed laws and regulations) as well as to information on government budget proposals and execution. Indeed, to be effective, measures to increase citizen voice and participation in policy processes—whether through consultation or Notice and Comment—depend critically on the timely availability of accurate information. As with voice and participation, there is still considerable scope for governments in developing East Asia to increase transparency and access to information.

Several governments in the region are already taking initiatives to increase government transparency. For example, China, Indonesia, Mongolia, Vietnam, and two states in Malaysia (Selangor and Penang) have all passed Freedom of Information legislation. And Malaysia is working to expand regulatory transparency by uniting all regulations and Notice and Comment on one common information platform. China’s Open Government Initiative (OGI) mandates that a range of government documents (such as legal, normative documents; budgets; and land and infrastructure plans) be placed online at every level of government. Vietnam’s Access to Information Law, which went into effect in 2018, is similar to that of China’s OGI. The new Vietnamese law also contains provisions allowing citizens to request information not specifically outlawed and mandates that agencies reply within a specified time frame (Malesky 2018). Although evidence on the impact of transparency measures in developing East Asia is relatively limited, research on the Chinese OGI suggests that the initiative has been effective in reducing misuse of public funds (Stromseth, Malesky, and Gueorguiev 2017).

In increasingly complex and diverse economies and societies, transparency provides an efficient mechanism for central officials to monitor the activities of lower officials by essentially delegating the task of oversight to groups and individuals with more intimate local knowledge. Transparency, in allowing the media, civil society, and individuals to report on political abuses and to embarrass local leaders, creates “millions of auditors” (Kaufmann 2003) who have been deputized by central authorities—a substitute for direct accountability through elections and voters (Smulovitz and Peruzzotti 2000). The idea is that the incentive effect associated with increased transparency can have an impact, even in the absence of a well-functioning electoral system (Bauhr, Grimes, and Harring 2010).

Making information available through transparency initiatives is an important first step toward increasing accountability. Transparency alone may be insufficient to promote accountability or to induce positive changes in governance, however. Once information is made public, the effectiveness of transparency initiatives to promote government responsiveness ultimately depends on people’s ability to induce action in the policy arena. Government responsiveness is a function of the incentives public officials face in terms of ultimately being held accountable, whether through electoral or other mechanisms (World Bank 2017b).

Strengthening accountability
Greater accountability in government will be critical for developing East Asian countries to avoid capture and to address the other emerging political economy challenges as they seek to transition from middle-income to high-income status. Accountability is most commonly achieved through increasing the contestability of political and policy-making processes, creating systems of checks and balances, and developing more-inclusive institutions. There is some evidence that the number of checks and balances have increased in parts of developing East Asia and that, as a whole, the region is roughly on par with lower-middle-income countries globally. Nevertheless, countries in the region would still benefit from further strengthening their systems of checks and balances.

While electoral systems and institutional (legislative and judicial) constraints on
executive powers are the most common and direct mechanisms for promoting greater accountability in government, they are not the only means. Broad business coalitions can also play a significant role in demanding accountability on the part of the government (World Bank 2017b). In fact, this was a key component of sound economic governance among the now-advanced economies in East Asia, which institutionalized mechanisms that established frequent and regular consultation between the government and business (Birdsall and others 1993). International agreements and institutions can also contribute to greater government accountability, as international conventions, treaties, and other formal agreements can serve as valuable (even if imperfect) commitment mechanisms for governments (World Bank 2017b). In the economic sphere, regional or multilateral agreements made, for instance, through the Association of Southeast Asian Nations (ASEAN) or through deep trade agreements, such as the CPTPP, can serve as such commitment mechanisms.

**Foundational policies**

**Strengthening bureaucratic quality**

As development policy making becomes increasingly complex in developing East Asia, there will also be a premium on improving the quality and performance of those who serve in public agencies. A key element of this will involve strengthening mechanisms to encourage merit-based selection and promotion rather than relying on political or personal relationships and influence.

Strengthening public sector performance management will also play a key role. In this context, technology platforms are providing increasingly powerful tools to support bureaucratic upgrading through computer-assisted recruitment testing systems as well as through enhanced performance management systems. Technology platforms can also improve managerial control, reduce individual discretion (including opportunities for rent seeking), enable feedback on public service quality, and ensure that public resources are collected and spent efficiently (World Bank 2016).

Two recent initiatives—one in Indonesia and one in China—demonstrate how governments in the region are working to enhance public sector effectiveness through improved hiring procedures and enhanced performance management, and aided by new technological platforms (box 5.2). Continued efforts to raise the quality and effectiveness of civil servants will be critical to meeting countries’ governance challenges as they seek to transition from middle income to high income.

**BOX 5.2  Strengthening meritocratic hiring and promotion, civil service performance, and performance management: Recent initiatives in Indonesia and China**

Two recent initiatives help illustrate how the governments of Indonesia and China are working to improve the quality of civil servants at entry and enhance the management systems governing their day-to-day performance on the job.

**Indonesia: Computer-assisted civil service exams for merit-based recruitment**

In Indonesia, the Civil Service Agency (BKN) introduced a computer-assisted testing system (CAT) to replace the previously long-standing manual testing system that had created opportunities for rampant corruption in civil service recruitment by line ministry officials. Now, candidates are randomly assigned computer questions taken from a purpose-built database of 20,000 relevant questions. The system includes weights assigned to questions to ensure that all candidates face tests of equal difficulty and allows for affirmative action toward candidates from selected groups such as indigenous people or those living in regions with poorer school quality.

The exams are graded while being taken, and the results are posted in real time outside the testing center. This allows observers (such as civil society

*box continues next page*
Governments in developing East Asia also face the challenge of financing the ambitious high-income, increasingly middle-class, agendas outlined in this report. To do so, however, they will need to increase domestic resource mobilization. Successfully addressing low revenue mobilization will require addressing a multiplicity of constraints. In financing the transition to high income, governments will also need to balance the inevitable trade-offs between promoting growth, fostering inclusion, and raising adequate revenues. Managing these trade-offs will likely require developing a new social contract, in which governments provide more and better public services in return for greater citizen participation in and better compliance with the tax system.

**Emerging priorities**

**Expanding the tax base**

Efforts to expand the tax base must use existing taxes better as well as introduce new taxes. Countries in developing East Asia have relied extensively to date on indirect taxes, such as value added taxes (VAT) as well as excise and trade taxes. There remains scope, however, for raising tax revenues through more extensive use of direct taxes.
taxes, including greater use and higher coverage of personal income taxes. Similarly, there is scope to increase the use of property or wealth taxes. The latter taxes have the benefits that they should not unduly affect firms’ investment decisions and can be designed in ways that are progressive and thus can contribute to promoting inclusive growth.

Increasing domestic revenues could also be achieved in part through the introduction of new taxes that address market failures—for example, on activities that impose negative health or environmental externalities. Discussions are under way in parts of the region regarding the use of “green taxes,” including on carbon emissions and on use of harmful substances like nonbiodegradable plastics as well as on tobacco (World Bank 2018d). These have the dual benefits of generating government revenues while supporting more sustainable economic growth.

Efforts are also under way in several developing East Asian countries to identify new tax instruments or to reform existing taxes in the face of mounting budget pressures. In the Philippines, the government recently initiated a series of intended tax reforms, the first round of which focused on the reform of VAT, personal, and corporate income tax and excise taxes. Other countries are planning to introduce new tax measures—for example, new mechanisms for an alternative minimum tax and a tax on inheritance and gifts in Indonesia; a tax on passive or capital income in Mongolia; and a new environmental tax in Vietnam (World Bank 2017a, 2018d).

**Reducing tax competition**

Efforts to increase domestic revenue mobilization will also be more effective if they are better coordinated across the region. Countries in developing East Asia have a history of tax competition, usually to attract foreign direct investment or to prevent it from migrating elsewhere (World Bank 2017a). In a changing and increasingly competitive global economic environment, there is a risk that such tax competition could intensify.

Without effective regional cooperation, developing East Asian countries—acting individually—could be driven toward granting excessive fiscal incentives, which would undermine their abilities to finance their increasing revenue needs as they transition to high-income status. In this context, the ASEAN countries have attempted to reverse the trend toward tax competition by initiating a dialogue on improving transparency and exchange of taxation information (World Bank 2017a).

**Foundational policies**

**Simplifying tax codes**

Measures to simplify countries’ tax codes could contribute to more transparent, fairer, and more efficient tax systems, while increasing ease of payments. Tax simplification can also contribute to reducing the costs of tax compliance and, in doing so, support greater revenue mobilization. Reducing VAT exemptions, for example, would provide one avenue for tax code simplification, as would simplification of corporate income taxes.

**Strengthening tax administration**

Several countries in the region, including Cambodia, China, Indonesia, Myanmar, the Philippines, and Vietnam, have recognized the need to improve tax administration and are undertaking measures to do so. Some of those measures have contributed to improved revenue mobilization. As noted above, new technology platforms, coupled with efforts to raise bureaucratic quality, could also help lower tax compliance costs and increase revenue collection through enhanced public administration. The Chinese tax administration’s effort to enhance the effectiveness of its tax collection is a case in point (as discussed in box 5.2).

**Conclusion**

Over the past half century, East Asia’s economic success has been built on a combination of policies that fostered outward-oriented, labor-intensive growth; developed people’s
basic human capital; and maintained sound economic governance. As the world and the countries themselves change, there are growing concerns about the efficacy of this model as countries seek to transition from middle-income to high-income status.

For countries in developing East Asia to successfully navigate these changes, they will need to find ways of boosting productivity, fostering inclusion, and strengthening the effectiveness of state institutions. In the face of rapid and unpredictable change, policy makers will have to move decisively to seize the opportunities to sustain East Asia’s remarkable development experience.

Notes

1. For details, see Iootty (2018). China and Vietnam are the only two developing East Asian countries included in the WMS. Data are also available for Malaysia but are not comparable on all counts. For details of the methodology and the dataset, see the WMS website: https://worldmanagementssurvey.org.

2. Credit registries are managed by the public sector and collect information from supervised financial institutions. In contrast, credit bureaus are private, for-profit organizations that collect information required by commercial lenders and can offer value-added services (such as credit scores).


5. One unique feature of China’s and Vietnam’s schemes is that they include provisions for continued health insurance coverage as well as unemployment benefits (Betcherman and Moroz 2018).

6. In Malaysia, the high cost and variable availability of fixed broadband internet services is driven by limited competition and a fragmented regulatory environment in the fixed broadband market. For additional details, see World Bank (2018c).

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East Asia has been a paragon of global development success. The dramatic transformation of the region over the past half century—with a succession of countries having progressed from low-income to middle-income and even to high-income status—has been built on what has come to be known as the “East Asian development model.” A combination of policies that fostered outward-oriented, labor-intensive growth while strengthening basic human capital and providing sound economic governance has been instrumental in moving hundreds of millions of people out of poverty and into economic security.

Yet East Asia’s economic resurgence remains incomplete. More than 90 percent of its people now live in 10 middle-income countries, many of which can realistically aspire to high-income status in the next generation or two. But these countries are still much less affluent and productive than their high-income counterparts. Even as the region’s middle-income countries attempt to move up to high-income status, they confront a rapidly changing global and regional economic environment. Slowing growth in global trade and shifts in its patterns, rapid technological change, and evolving country circumstances all present challenges to sustaining productivity growth, fostering inclusion, and enhancing state effectiveness.

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