

Regional Dimensions of Recent Weakness in Investment

Drivers, Investment Needs and Policy Responses

Ekaterine Vashakmadze

Gerard Kambou

Derek Chen

Boaz Nandwa

Yoki Okawa

Dana Vorisek



WORLD BANK GROUP

Development Economics

Development Prospects Group

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Abstract

Investment growth in many emerging market and developing economies (EMDEs) has slowed sharply since 2010. Investment growth performance has varied significantly across different regions, however. This paper examines the temporal evolution of investment growth in six EMDE regions, documents remaining investment needs, especially for infrastructure, and presents a set of region-specific policy responses to address these needs. It reports three main findings. First, investment growth has been particularly weak in EMDE regions with a large number of commodity exporters. In regions with a substantial number of commodity-importing economies, investment growth has been

somewhat resilient but has also declined steadily since 2010. Second, sizable investment needs remain in most EMDE regions to make room for expanding economic activity and rapid urbanization. A sizeable portion of these investment needs is in infrastructure and human capital. Finally, while specific policy priorities vary across regions, several policy options to address remaining investment needs apply universally. These include more, or more efficient, public investment and measures to improve overall growth prospects and the business climate. Improved project selection and monitoring, as well as better governance, may enhance the efficiency and benefits from public investment.

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Ekaterine Vashakmadze, Gerard Kambou, Derek Chen,
Boaz Nandwa, Yoki Okawa, and Dana Vorisek¹

World Bank
Development Prospects Group

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¹ Vashakmadze (evashakmadze@worldbank.org), Kambou (gkambou@worldbank.org), Chen (dchen@worldbank.org), Nandwa (bnandwa@worldbank.org), Okawa (yokawa@worldbank.org), and Vorisek (dvorisek@worldbank.org). The paper was produced with inputs from Sandy Ye Lei and Ergys Islamaj. Research assistance was provided by Trang Nguyen and Liwei Liu. It has benefited from valuable comments and suggestions from David Robinson and David Rosenblatt. This Working Paper represents the views of the authors and does not necessarily represent World Bank Group views or policy. The views expressed herein should be attributed to the authors and not to the World Bank Group, its Board of Executive Directors, or its management. Figures and background data are available at <http://www.worldbank.org/gepwww.worldbank.org/gep>.

I. Introduction²

Investment plays a critical role for growth and social development. Investment in human capital and high-quality, sustainable infrastructure lays the foundation for output and productivity growth, provides basic services to households and market access for firms; enables sustainable urban development; and opens corridors of trade to link into the global economy (Global Infrastructure Facility 2015). Competitiveness rests on strong human capital and quality infrastructure (World Economic Forum 2016). Infrastructure mitigates the challenges to economic activity imposed by distance, helps integrate domestic markets, and established critical connections to international markets. Strong human capital increases productivity and earnings.

Investment growth in emerging market and developing economies (EMDEs) has slowed sharply since 2010. However, investment growth performance has varied significantly across different regions (Figure 1). The objective of this paper is to examine the regional dimensions of recent weakness in investment.³ Specifically, the paper addresses the following three questions. First, how has investment growth in the six EMDE regions evolved? Second, what are the remaining investment needs across these regions? Third, which policies can help address investment needs?

Investment growth in EMDEs slowed from 10.2 percent in 2010 to 3.4 percent in 2015 and, based on partial data, likely slowed further in 2016. This slowdown exceeded 5 percentage points in almost half of EMDEs. In 2015, investment growth was below its long-term average in more than 60 percent of EMDEs and negative in about 30 percent of EMDEs.

Developments have varied widely across regions, however, reflecting the presence of commodity importers or exporters, the degree of political stability, and spillovers from key trading partners and investors. In the EMDE regions with a substantial number of commodity-importing economies—East Asia and Pacific (EAP), which accounted for one-quarter of global investment during 2010-15 and South Asia (SAR), which accounted for 4 percent—investment growth has been stronger than the average across EMDEs, but also declined steadily in 2010-14. Investment growth has since stabilized in EAP and SAR, in part reflecting reduced policy pressures for rebalancing, lower political tensions and sharply lower oil prices.

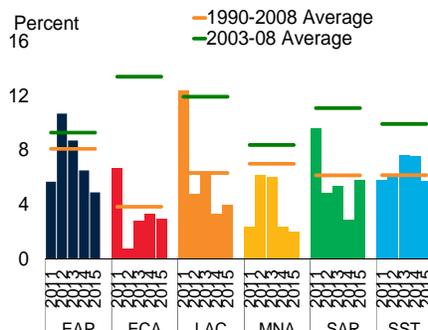
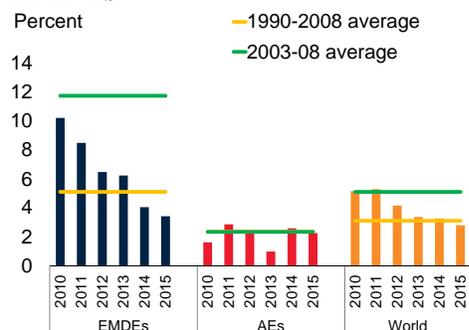
² This paper draws from background studies featured in World Bank (2017a). Figures and background data presented here are available at www.worldbank.org/gep.

³ The six regions include East Asia and Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), Middle East and North Africa (MNA), and South Asia (SAR) and Sub-Saharan Africa (SSA).

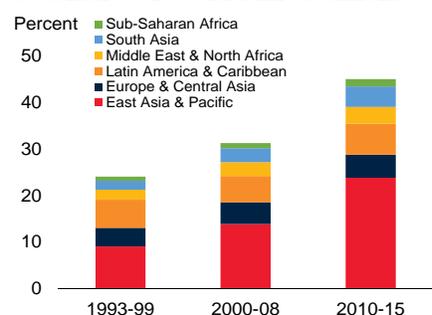
Figure 1: Regional variation in EMDE investment growth

Investment growth in EMDEs has slowed sharply since 2010 but there has been considerable regional heterogeneity.

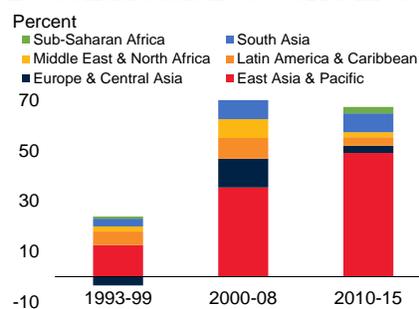
A. Investment growth: global, AEs, B. Investment growth by regions



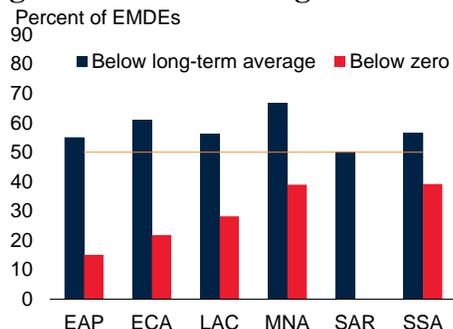
C. Share of world investment



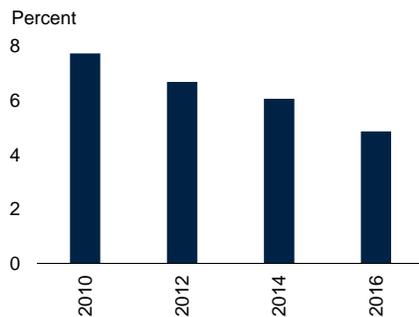
D. Contribution to world investment growth



E. Share of EMDEs with investment growth below the long-term average, 2015



F. Five –year ahead investment growth forecasts for EMDEs



Sources: Haver Analytics, World Economic Outlook, Consensus Economics.

Notes: GDP-weighted averages using 2010 real GDP at constant prices and exchange rates for weights. EAP is East Asia and Pacific; ECA is Europe and Central Asia; LAC is Latin America and the Caribbean; MNA is Middle East and North Africa; SAR is South Asia; SSA is Sub-Saharan Africa.

A. Share of EMDEs in each region with investment growth below the long-term average (1990-2008). Data for 2015. Horizontal line indicates 50 percent. AEs are advanced economies.

C. Each column shows the period average of the share of global investment contributed by EMDE regions denoted. Includes 95 EMDEs. The rest is contributed by 30 AEs.

D. The columns denote the percent contribution of EMDE regions to global investment growth over the periods denoted. Includes 95 EMDEs. The rest is contributed by 30 AEs.

E. Longterm average for 1990-2008.

F. Five-year ahead Consensus Forecasts in the year denoted. Unweighted averages of 21 EMDEs. Latest available month in the year denoted.

In contrast, since 2010, investment growth has declined sharply and registered several years of anemic growth or even contraction in EMDE regions with a large number of commodity exporters. In addition to a severe terms of trade deterioration since the peak of commodity prices in the first quarter of 2011, investment growth was set back by procyclical policy tightening (Nigeria, Russian Federation, South Africa, some Gulf Cooperation Council [GCC] countries), balance of payment pressures (Angola, Azerbaijan, Kazakhstan, Nigeria), political instability or policy uncertainty (Argentina, Brazil, Russia, Ukraine), spillovers from conflicts in fragile neighboring countries (Middle East and North Africa) and spillovers from recessions in neighboring countries (Central Asia, South Caucasus, South America). Many large economies in Europe and Central Asia (ECA) struggled with falling commodity prices, sharp adjustment of exchange rates, recessions in the Russia and Ukraine, and on-going geopolitical tensions. In Latin America and the Caribbean (LAC), investment growth fell from 12.5 percent in 2010 to -4.8 percent in 2015; in Europe and Central Asia (ECA), it declined from 9.2 percent in 2010 to -1.6 percent in 2015; in the Middle East and North Africa (MNA), it slowed from 4.2 percent in 2010 to 0.5 percent in 2015; and in Sub-Saharan Africa (SSA), it fell from more than 14 percent in 2010 to 0.3 percent in 2015.

Post-crisis investment weakness affected both public investment, which accounted for 31 percent of investment in 2010-15, and private investment. In all regions except SSA, public investment growth has slowed steadily from elevated levels during the global financial crisis to below long-term averages. This slowdown partly reflected increasing financing constraints as fiscal space eroded with crisis-related fiscal stimulus and slowing post-crisis growth. Following a post-crisis rebound in 2010, private investment growth also slowed sharply and remained below the long-term average in more than half of all EMDEs. Private investment growth was weakest in ECA, partly as a result of spillovers from the Euro Area crisis, and MENA, where political uncertainty in the wake of the Arab Spring weighed on sentiment.

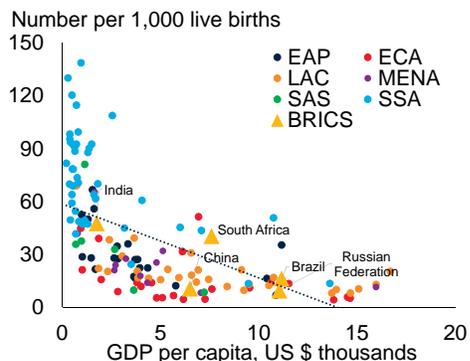
In some EMDEs, especially in China and commodity exporters, slowing investment growth in recent years is partly a correction from high pre-crisis investment growth. In China, this process has involved economic rebalancing towards domestic consumption and the services sectors. In commodity-exporting EMDEs, especially oil-exporting ones, a sharp terms-of-trade deterioration undermined long-term growth prospects and set back investment. A moderation of investment growth in commodity-importing economies reflected weak trading partner growth and slowing foreign direct investment (FDI). Political risk and weak growth prospects in major trading partners have been important obstacles for investment growth in all EMDEs.

Sizeable investment needs remain in EMDEs, driven by three forces: the need to alleviate severe poverty, income and demographic shifts, and rapid urbanization. Investment needs include the provision of basic public services, fostering efficiency, promoting innovation and ensuring sustainable growth. A sizeable portion of these investment needs is in infrastructure and human capital. Public investment in these areas can crowd in private investment, especially in the presence of economic slack, accommodative financial conditions, well-developed institutions, and a sufficiently skilled labor force (World Bank 2017a).

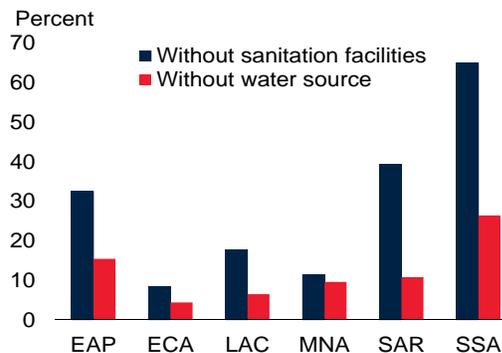
Figure 2. Regional variation in health outcomes and service provision

Despite some remarkable successes, provision of basic public services to reduce mortality and morbidity and enable basic economic activity, remains a challenge in many EMDEs, especially in Sub-Saharan Africa, but also in parts of other EMDE regions.

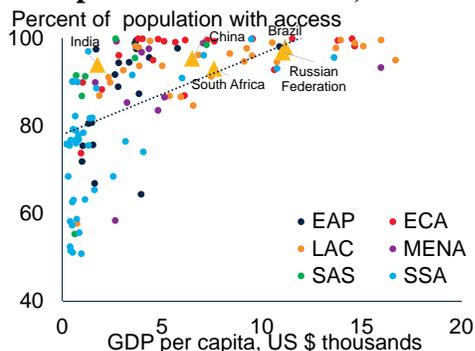
A. Under-5 mortality rate, 2015



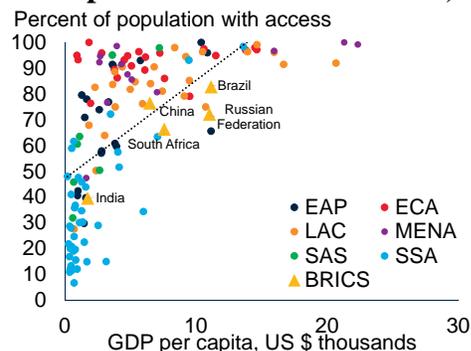
B. Access to improved water and sanitation, 2011-15



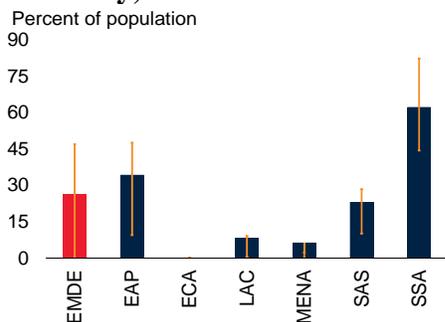
C. Improved water source, 2012



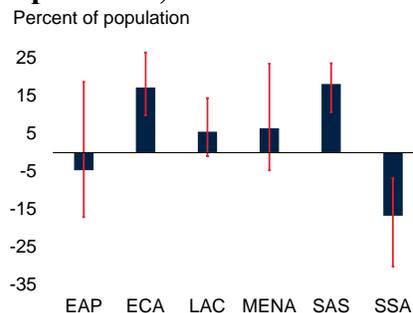
D. Improved sanitation facilities, 2015



E. Percent of population without access to electricity, 2012



F. Access to electricity, controlling for per capita GDP, 2012



Source: World Bank.

Notes: EAP is East Asia and Pacific, ECA is Europe and Central Asia, LAC is Latin America and the Caribbean, MNA is Middle East and North Africa, SAS is South Asia, SSA is Sub-Saharan Africa. BRICS are Brazil, Russia, India, China and South Africa. Regional aggregates are simple averages.

A. Under-five mortality rate is the probability per 1,000 that a newborn baby will die before reaching age five.

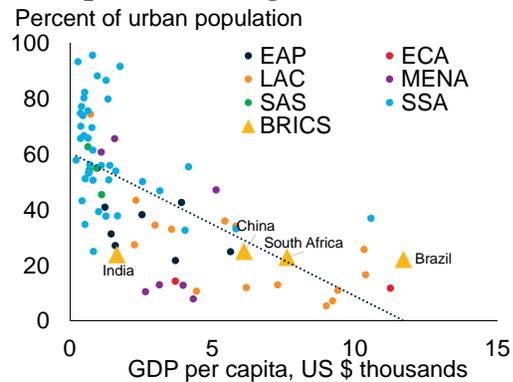
B. C. D. Improved sanitation facilities include flush/pour flush, ventilated improved pit latrine, pit latrine with slab, and composting toilet. An improved drinking water source includes piped water on premises (piped household water connection located inside the user's dwelling, plot or yard), and other improved drinking water sources (public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs, and rainwater collection).

E. F. Vertical bars indicate 25th-75th percentile range.

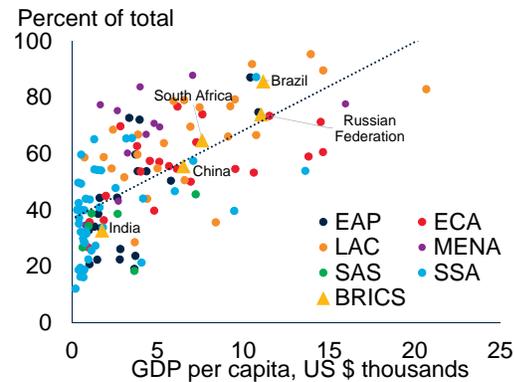
F. To control for per capita income, Figure shows deviation of access to electricity from results of a linear regression of access to electricity on per capita income.

Figure 3. Regional variation in urbanization and quality of transport infrastructure
Sizable investment is needed to accommodate urbanization and keep pace with growing economic activity.

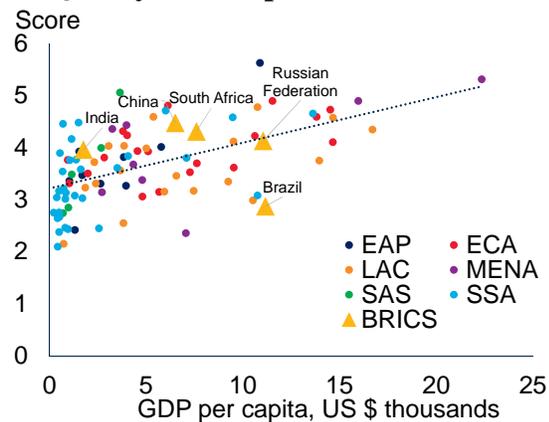
A. Population living in slums



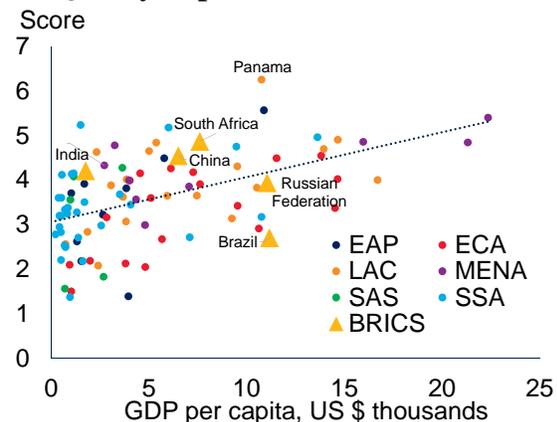
B. Urbanization rate



C. Quality of transportation infrastructure



D. Quality of port infrastructure



Sources: World Bank, World Economic Outlook.

Note: EAP is East Asia and Pacific, ECA is Europe and Central Asia, LAC is Latin America and the Caribbean, MENA is Middle East and North Africa, SAS is South Asia, and SSA is Sub-Saharan Africa. BRICS are Brazil, Russia, India, China and South Africa.

A. Data 2014. Population living in slums is the proportion of the urban population living in slum households, defined as a group of individuals living under the same roof lacking one or more of the following conditions: access to improved water, access to improved sanitation, sufficient living area, and durability of housing.

B. Data for 2015. Urban population refers to people living in urban areas as defined by national statistical offices. The data are collected and smoothed by United Nations Population Division.

C. Data for 2015. The score is from 1 to 7. Higher score indicates better quality. Quality of Transportation Infrastructure surveyed countries on the question of “How would you assess general infrastructure (e.g., transport, telephony, and energy) in your country?” The score is from 1 to 7. Higher value indicates better quality.

D. Data for 2015. The score is from 1 to 7. Higher score indicates better quality. Quality of Port Infrastructure surveyed countries on the question of “In your country, how would you assess the quality of seaports? (For landlocked countries: How accessible are seaport facilities?)”.

Basic public services. Despite some remarkable successes, the provision of basic public services, which help to reduce mortality and morbidity and enable basic economic activity, remains a challenge in many EMDEs, especially in Africa, but also in parts of other EMDE regions. The challenge of providing basic services—water and waste water management, access to markets, and access to basic health care and education—is especially large in Sub-Saharan Africa but continues in parts of other EMDE regions (Figure 2). About 770 million people worldwide lack access to clean water; 2.5 billion people do not have adequate sanitation; 2.8 billion people still cook their food with solid fuels (such as wood); and 1 billion people live more than a mile (2 kilometers) from an all-weather road (Global Infrastructure Facility 2015). There are over 59 million primary-school-age children without access to education, of whom more than half live in Sub-Saharan Africa.

Accommodating growth and urbanization. Investment in quality infrastructure and human capital is critical to expanding economic activity, enhancing productivity, and facilitating urbanization. EMDEs have the potential for decades of rapid urban development (World Bank 2015a). For example, relative to their per capita incomes, the share of the population living in urban agglomerations is below-average in India and Russia. Despite internal migration, the share of people living in urban centers in the EAP region remains at 54 percent in 2015, well below the advanced economy average (80 percent). Slums are still prevalent in about half of SSA economies, but also in Brazil and several other LAC economies (Figure 3).

Urbanization and accommodating growth puts a premium on quality transport network; reliable provision of electricity; and availability of quality education. The OECD (2012) estimates that worldwide air passenger traffic could double in 15 years; air freight could triple in 20 years; and port handling of maritime containers worldwide could quadruple in 15-20 years (OECD 2012). Yet, most of the current gateway and corridor infrastructure could not accommodate a 50 percent increase, let alone a doubling of passengers in 15 years or a tripling of freight in 20 years (OECD 2012). Transport infrastructure is of below-average quality in Brazil and several economies in the ECA region, especially in Central Asia, and the quality of ports is below the average in Brazil and Russia (Figure 3). Similarly, almost 20 percent of the world's population still has no access to electricity. Just to keep pace with growing global electricity demand, annual investment in energy supply of almost 2 percent of GDP (\$1.6 trillion) may be needed until 2035 (International Energy Agency 2014). Annual spending needs on energy efficiency, measured against a 2012 baseline, are expected to rise almost five-fold by 2035 (Ruiz-Núñez and Wei 2015).

Sustainable growth. Even in EMDEs with above-average infrastructure and adequate provision of basic education and health care, investment is needed to ensure environmentally sustainable growth and preserve competitiveness. Environmental challenges include water management, deforestation and land degradation, air pollution and natural disaster management (Lee and Pang 2015). For example, relative to their per capita incomes, air pollution is high in China, India, and several GCC countries. To maintain competitiveness in the global economy, both innovation and absorption of productivity-enhancing technologies is critical, supported by higher education and training. Innovation can be fostered by investment in research and development; the presence of high-quality scientific research institutions that can generate the basic knowledge needed to

develop new technologies; collaboration between different sectors in research and technological developments; and the protection of intellectual property. These activities can be buttressed by well-educated workers who are able to perform complex tasks and adapt rapidly to their changing environment and the evolving needs of the production system (WEF 2016). The quality of education is particularly weak in South Africa and in Brazil and other parts of LAC (Figure 4).

How large could total investment needs be over the next decade? For infrastructure, specifically, a number of studies have estimated sizeable investment needs. At the global level, the OECD (2006) estimated that key infrastructure sectors (land transport, telecommunications, electricity and water) require additional annual investment of 2.5 percent of global GDP (\$53 trillion) until 2030 to keep pace with rising global demand. Electricity generation and other energy-related infrastructure in oil, gas and coal require an additional investment of 1.5 percent of global GDP (\$3 trillion per year; OECD 2011; McKinsey 2013; and WEF 2013a). Global environment-related infrastructure needs represent another 1.7-2.5 percent of global GDP (\$3.5-5 trillion per year; WEF 2013a).

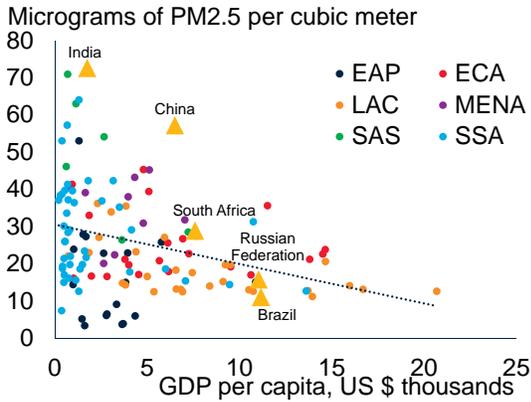
Since EMDEs tend to grow faster on average than advanced economies, investment needs for maintenance and increased capacity of infrastructure are estimated to be highest in EMDEs (6-8 percent of GDP on average; Fay et al., 2011). However, there are significant differences in the size and the composition of investment needs across regions and countries depending on development and income levels, demographic and urbanization trends. Estimated infrastructure investment needs are largest in U.S. dollar amounts in fast-growing, populous Asia (\$9.5-16 trillion by 2030). However, relative to GDP, infrastructure needs are largest in Africa and South Asia where, by some estimates, they reach double-digits (Foster and Briceno-Garmendia 2010; Inderst 2016). On average across EMDEs, investment requirements are largest in electricity generation, followed by construction and upgrading of transportation networks, real estate development, water and telecommunications (RBS 2011). In Asia, about half of investment needs are for energy, about one third for transport and the rest for telecommunications and water.

A sizable portion of these infrastructure investment needs remain unmet, although estimates vary widely and are subject to large uncertainty (e.g., Gramlich 1994 and Dethier and Moore 2012). For example, the difference between expected investment needs and current actual investment in EMDEs is estimated at \$1-2 trillion per year (1.25 to 2.5 percent of EMDE GDP; WEF 2013a; Bhattacharya et al. 2012, McKinsey 2013, 2016).

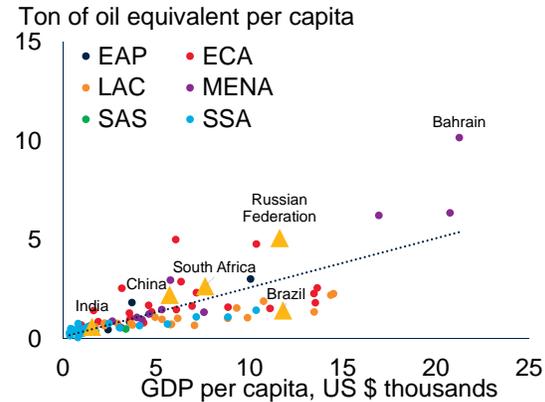
Public investment in infrastructure can catalyze private investment (World Bank 2017a). However, public investment is more likely to crowd in private investment in the presence of economic slack, accommodative financial conditions, sizable investment needs, well-developed institutions, and a sufficiently skilled labor force. Improved project selection and monitoring, as well as better governance, may enhance the benefits from public investment.

Figure 4. Regional variation in air pollution, energy use, and education outcomes
Investment in human capital is needed to preserve competitiveness. Investment is also needed to ensure that growth is sustainable.

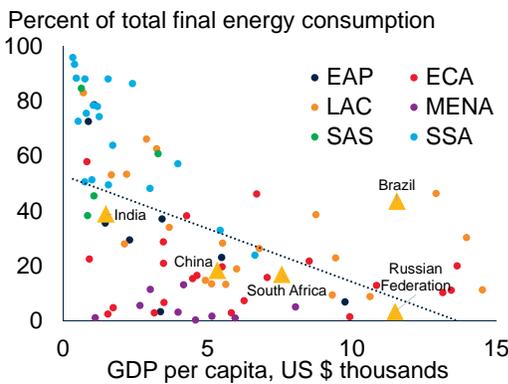
A. Mean exposure to air pollution, 2015



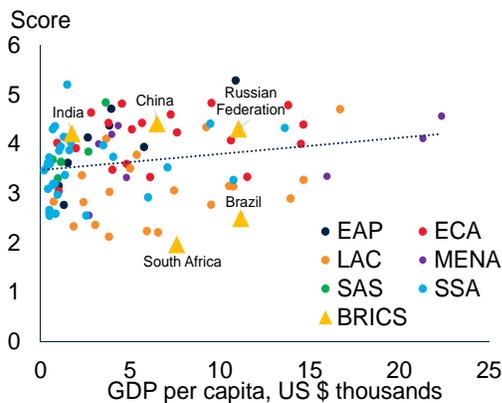
B. Energy use intensity, 2013



C. Renewable energy consumption, 2012



D. Quality of math and science education, 2015



Source: World Economic Forum, World Bank.

Note: EAP is East Asia and Pacific, ECA is Europe and Central Asia, LAC is Latin America and the Caribbean, MENA is Middle East and North Africa, SAS is South Asia, and SSA is Sub-Saharan Africa. BRICS are Brazil, Russian Federation, India, China and South Africa.

A. Population-weighted exposure to ambient PM2.5 pollution is defined as the average level of exposure to concentrations of suspended particles measuring less than 2.5 microns in aerodynamic diameter, which are capable of penetrating deep into the respiratory tract and causing severe health damage. Exposure is calculated by weighting mean annual concentrations of PM2.5 by population in both urban and rural areas.

B. Energy use refers to use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport.

C. Renewable energy consumption is the share of renewable energy in total final energy consumption.

D. Data are as of 2015. The score is from 1 to 7. Higher value indicates better quality. Quality of math and science education surveyed countries on the question of “In your country, how do you assess the quality of math and science education?”

The following six sections discuss investment developments and remaining investment needs in each of the World Bank's six EMDE regions. The final section concludes with a summary of policy implications.

II. East Asia and Pacific

During 2010-15, East Asia and Pacific accounted for almost one-half of the growth in global investment, and one-quarter of global investment. Investment growth has steadily declined from 12.1 percent in 2010 to 6.5 percent on average in 2015-16—well below the double-digit rates of 2003-08. The slowdown has been broad based and reflected decelerating public as well as private investment.

The slowdown in investment growth in the EAP region was concentrated in China and commodity exporters. To some extent, the deceleration represents a necessary adjustment from high pre-crisis growth rates and the post-crisis policy stimulus. The process has involved economic rebalancing, from manufacturing industry to services, and from investment (in excess of 40 percent of GDP) and exports to domestic consumption. In other economies, the cycle in commodity markets, from a decade of high prices to recent weakness, has encouraged adjustment. Despite several decades of rapid investment growth prior to the recent slowdown, requirements in the areas of transport, health and education, and environmental protection, remain sizable across the region.

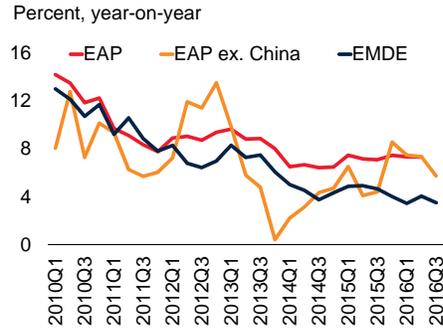
II.1. How has investment growth in the EAP region evolved?

Investment growth in East Asia and Pacific has steadily declined—from 12.1 percent in 2010 to 6.5 percent on average in 2015-16. This is well below the region's double-digit growth rates of 2001-08, but higher than in other EMDE regions. The slowdown was particularly pronounced in China (Figure 5). It reflected decelerating public as well as the private investment growth, as the coordinated fiscal stimulus following the global financial crisis was unwound (especially in China).

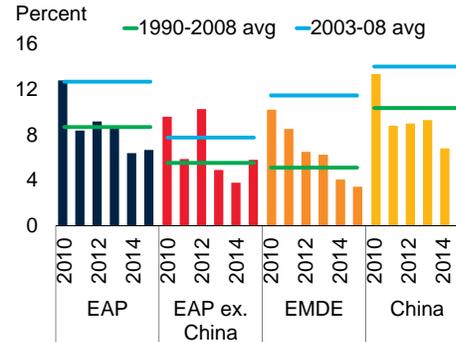
Figure 5. EAP: Investment growth

Investment growth in the EAP region stabilized at moderate levels in 2015-16 following a gradual decline in 2010-13. This decline reflected a steady slowdown in China and a sharp deceleration of investment growth in commodity exporters through end-2013. Since early-2014, investment growth has begun to recover in major commodity exporters as their terms-of-trade bottomed out and major central banks embarked on easing cycles. FDI to the EAP region remained buoyant and supported investment growth.

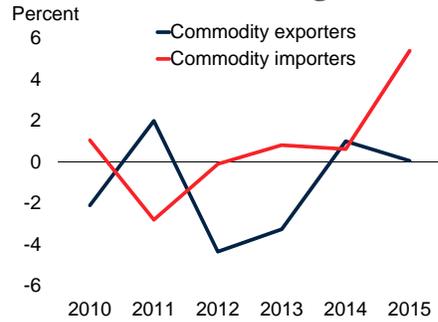
A. Investment growth



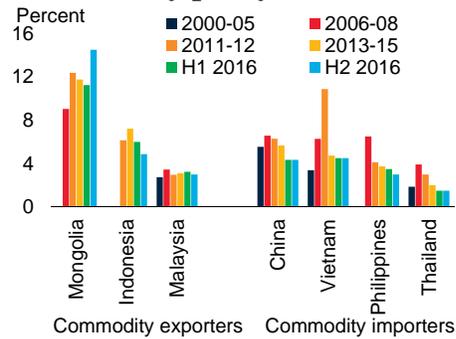
B. Investment growth



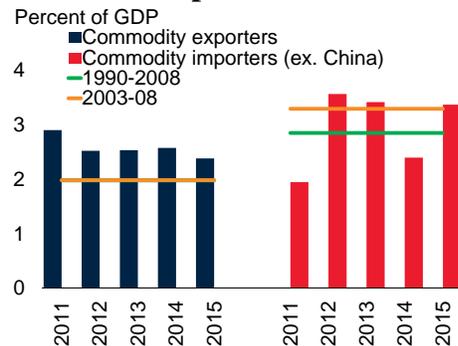
C. Term of trade change



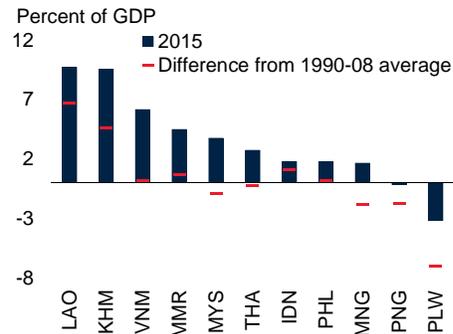
D. Monetary policy rates



E. FDI: Groups



F. FDI: Countries



Sources: Haver Analytics; International Monetary Fund; United Nations Conference on Trade and Development; World Bank, World Development Indicators, World Bank.

A. GDP-weighted averages.

C. Investment-weighted averages. Commodity exporters include Indonesia, Malaysia, Myanmar, and Papua New Guinea. Commodity importers include Cambodia, the Philippines, Thailand, and Vietnam. An increase denotes an improvement in terms-of-trade.

D. Policy rates are the average of end-of-period data.

E. FDI inflows. Weighted averages.

F. For difference from 1990-2014 average, positive values indicate improvement of FDI inflows. LAO = Lao, PDR, KHM = Cambodia, VNM = Vietnam, MMR = Myanmar, MYS = Malaysia, THA = Thailand, IDN = Indonesia, PHL = Philippines, MNG = Mongolia, PNG = Papua New Guinea, PLW = Palau.

In *China*, investment growth slowed sharply from a 22.8 percent peak in 2009 to 6.5 percent on average, in 2015-16. The deceleration reflected a rebalancing towards more sustainable growth. The rebalancing of the economy has involved a shift from capital accumulation (in excess of 40 percent of GDP) and exports to domestic consumption, and from manufacturing industry to services. By 2015-16, the drivers of investment growth had changed. Large debt stocks resulting from record-high credit growth in 2010-13 continue to weigh on investment growth. Nevertheless, China's investment rate remains elevated at 43 percent of GDP in 2016.

Until 2015, *commodity importers other than China* faced investment headwinds from tight monetary, fiscal, and prudential policies that were designed to contain rapid credit growth. Also, the uncertainty due to political problems in Thailand and delays in investment project approvals in the Philippines held back investment in these countries.

In *commodity exporters* in the region, investment growth slowed sharply during 2012-14. In large commodity-exporting economies (Indonesia and Malaysia), this slowdown mainly reflected policy tightening in response to financial market stress during the 2013 Taper Tantrum, and to weaker terms-of-trade as a result of declines in commodity prices (especially raw materials, fertilizers, metals and minerals) from their early-2011 peaks. In smaller, more heavily commodity-dependent economies, investment contracted as FDI for mining sector projects declined, and as domestic policies tightened sharply in response to balance of payments stress (World Bank 2015b).

Since 2015, investment growth has begun to recover in the EAP region, with the exception of China, where it stabilized at around 6.5 percent (Figure 6). This has reflected a number of developments: stabilizing commodity prices; more accommodative policies amid low inflation and benign global financial conditions; and buoyant FDI. Various factors contributed to the increased FDI: a reduction of political turbulence in Thailand; improved prospects for electronics manufacturing under WTO membership for Vietnam; and the opening up in Myanmar that began in 2011. In China, the composition of FDI has shifted from manufacturing—held back by rising wages and production costs, especially in coastal regions—towards services, and from lower value-added products towards higher value-added products such as cars (UNCTAD 2016).

II.2. What are the remaining investment needs in the EAP region?

Infrastructure needs and priorities. Income and demographic shifts, and rapid urbanization are the three main forces driving investment needs in the region (World Bank 2015c, 2016b). Rapid urbanization, large-scale migration, and population aging place heavy strains on urban infrastructure for housing, transportation, healthcare, and education. Meeting the growing demands of these forces requires choosing a balance between economic growth and environmental protection (ESCAP 2015).⁴ Estimates of costs vary widely (Inderst 2016; Bhattacharyay 2012; McKinsey 2014). The largest costs involve road construction and upgrading, energy infrastructure, and real estate development (McKinsey 2014). The region shows a significant disparity in density and quality of transport networks, electricity provision and housing, with greater gaps in China,

² For example, in addition to 170 cities in China with populations exceeding 1 million, China is expected to gain 292 million city dwellers by 2050 (World Economic Forum 2015).

Indonesia, and lower-income ASEAN economies (primarily because of large landmass and population size). There is substantial demand for upgrading and maintenance of infrastructure in other regional economies, including Malaysia, the Philippines, and Thailand.

Infrastructure upgrades and challenges. Despite some remarkable successes, providing adequate transport networks, power, water, and other facilities remains a challenge across much of the region (Figure 7).

Infrastructure projects underway. Extensive construction activities are underway in the region (BMI 2016). Transport, especially rail, accounts for the largest share. The aim is to integrate the region's transport networks, and to accommodate rapid urbanization.⁵ These projects are supported by government initiatives such as the China's One Belt One Road.

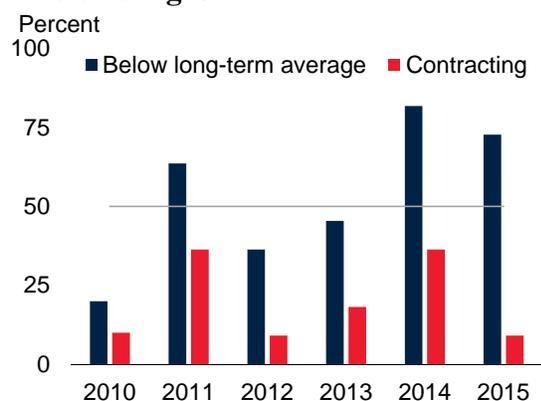
- *China's* highway network more than doubled in size between 2004 and 2014, and the share of high-speed railways was boosted from 33 percent to 50 percent of total railway kilometers. Yet, transport density still falls far short of that in advanced economies. Infrastructure needs vary considerably across Chinese regions, and range from high-profile projects (such as high-speed railways) to installing basic municipal infrastructure and pollution-reducing or -reversing technologies (World Bank 2013a, World Bank and DRC 2014).
- Lack of adequate infrastructure are the main cause of *Indonesia's* high logistics costs (around 17 percent of companies' total expenditure). Transport costs are high. About one-quarter of the population of Indonesia remains without electricity.
- In *Lao PDR, Cambodia, and Vietnam*, investment in basic road infrastructure is a priority (World Bank and Vietnam Ministry of Planning 2016).
- In *Malaysia*, high-profile projects like the expansion of the public transport system in Kuala Lumpur, and airport and port upgrades, are anticipated to proceed through 2020. Middle-income ASEAN countries in general, such as *Malaysia and Thailand*, are still investing heavily in the rail and public transport systems.
- The *Philippines* is particularly weak with regard to transport and trade-related infrastructure. It continues to rank above 100 globally in the overall state of its infrastructure (World Economic Forum 2015), with particularly low rankings for the quality of its seaports and airports. About one-quarter of the population remains without electricity.
- In many East Asian countries, about one-third of the population lives in substandard housing.

⁵ For example, in addition to 170 cities in China with populations exceeding 1 million, China is expected to gain 292 million city-dwellers by 2050 (World Economic Forum 2015).

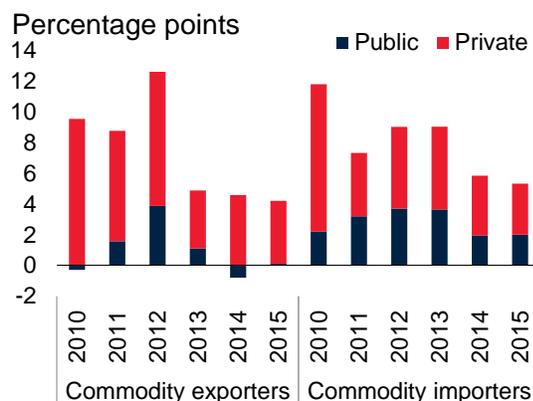
Figure 6. EAP: Investment growth slowdown and investment needs

In 2014, virtually all EAP economies recorded investment growth below their long-term average, mainly reflecting weak private investment. A rebound of investment in 2015 helped, but investment growth remains below its long-term average in more than half of EAP economies. Long-term forecasts suggest continued weakness in investment growth, while sizable investment needs remain in infrastructure.

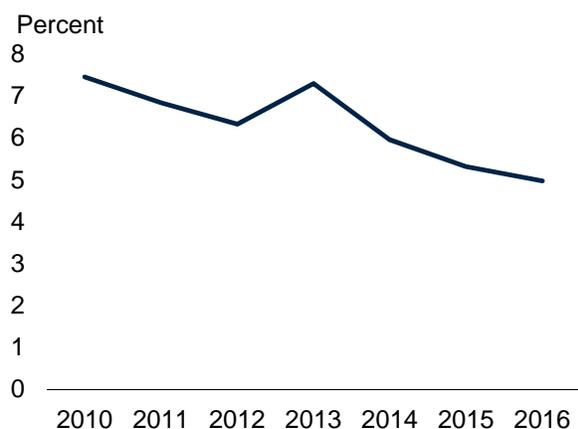
A. Share of countries with weak investment growth



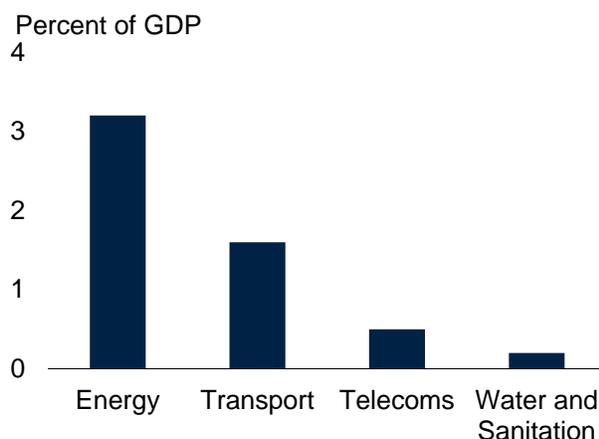
B. Contributions to investment growth



C. Long-term investment growth expectations



D. Infrastructure investment needs, East and Southeast Asia



Sources: Bhattacharya (2012), China Economic and Industry Data Database (CEIC), Consensus Economics, General Statistics Office of Vietnam, Haver Analytics, Inderst (2016), Investment and Capital Stock database, International Monetary Fund, World Bank.

A. Share of countries in EAP region with investment growth below the long-term (1990-2008) average or negative investment growth (“contracting”).

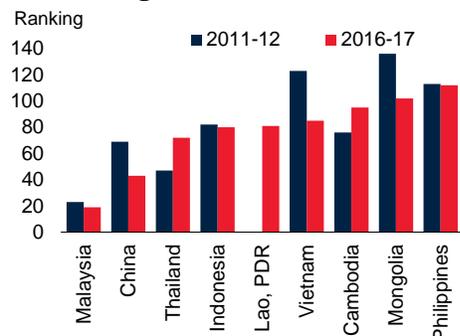
B. Weighted averages of gross fixed capital formation growth rates in the public and private sectors, respectively, in constant 2005 U.S. dollars. The sample includes nine EAP economies.

C. Five-year ahead consensus forecasts made in the year denoted. Weighted average.

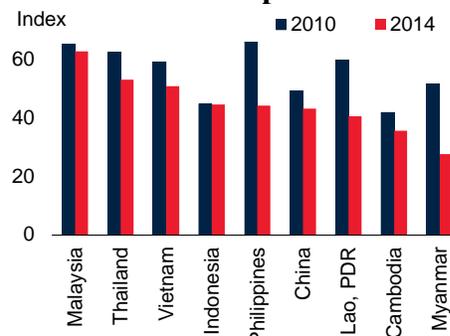
Figure 7. EAP: Infrastructure indicators

Despite significant progress, providing adequate transport networks, power, water and other facilities remains a challenge across much of the region. EAP economies are confronted by environmental problems that threaten to undermine future growth and regional stability.

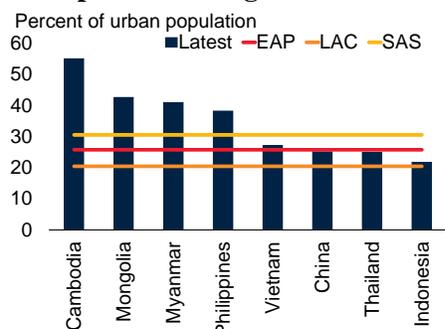
A. Ranking of overall infrastructure



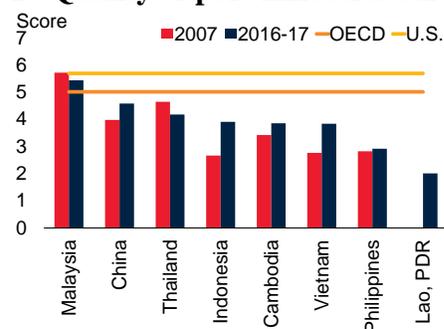
B. Environmental performance



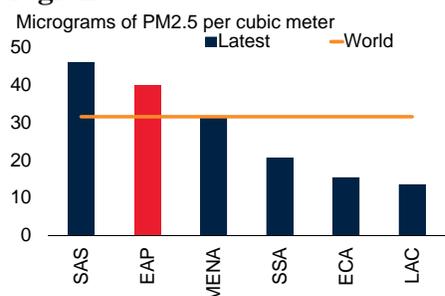
C. Population living in slums



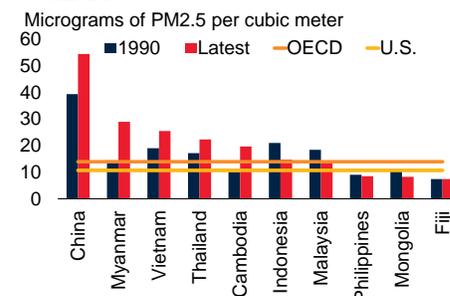
D. Quality of port infrastructure



E. Air pollution, mean annual exposure: regions



F. Air pollution, mean annual exposure: countries



Sources: Environmental Performance Index; World Economic Forum; World Development Indicators, World Bank.

A. Ranking of 140 countries according to the quality of their infrastructure. 1= best, 140 = worst.

B. The Environmental Performance Index (EPI) is constructed through the calculation and aggregation of 20 indicators reflecting national-level environmental data, including child mortality, wastewater treatment, access to drinking water, access to sanitation, and air pollution average exposure to PM2.5. These indicators use a “proximity-to-target” methodology, which assesses how close a particular country is to an identified policy target. Scores are then converted to a scale of 0 to 100, with 0 being the farthest from the target (worst observed value) and 100 being closest to the target (best observed value).

C. Latest data are for 2014.

D. 1= extremely underdeveloped; 7= well developed and efficient by international standards.

E.F. This measures the average level of exposure of a nation's population to concentrations of suspended particles measuring less than 2.5 microns in aerodynamic diameter, which are capable of penetrating deep into the respiratory tract and causing severe health damage. Exposure is calculated by weighting mean annual concentrations of PM2.5 by population in both urban and rural areas. Latest data are as of 2013.

E. EAP is East Asia and Pacific; ECA is Europe and Central Asia, LAC is Latin America and Caribbean; MENA is Middle East and North Africa; SAS is South Asia; SSA is Sub-Saharan Africa.

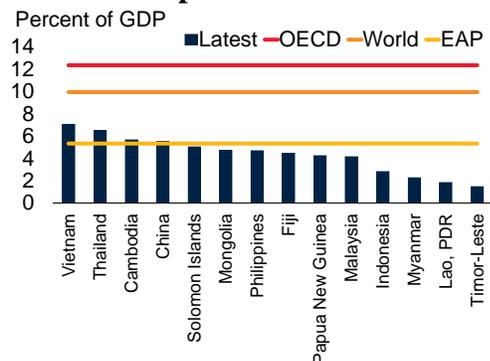
Health care, education and environment. The region has made great progress in human development outcomes, including child survival, nutrition, and education. Despite this progress, the region still faces serious education and human-resource shortfalls (Figure 8).

- *Health care.* EMDEs in the EAP region have reduced child mortality rates by an average of two-thirds between 1990 and 2015. However, child mortality rates in Lao PDR, Myanmar, and Papua New Guinea, and Timor-Leste are still well above global averages. In addition, the region has historically faced a high burden of disease from infectious diseases, some of which have potential global reach (e.g., SARS and pandemic influenza). Within a generation, rates of non-communicable diseases (NCDs) are expected to rise, and infectious diseases are expected to remain a risk associated with high population mobility and environmental degradation (Anbumozhi and Ponciano 2015). Adjusting to these long-run trends will require public investment in basic infrastructure, education, health and environmental protection.
- *Education.* Although enrollment in primary education in the region is almost universal, there are deficiencies in student retention (Cambodia, Lao PDR, Myanmar), quality of education (Thailand, Malaysia, Vietnam, Cambodia, Lao PDR), and knowledge gained as measured by literacy rates (Papua New Guinea, Timor-Leste, Lao PDR, Cambodia).
- *Environmental challenges.* Many countries in the region face environmental problems that threaten to undermine future growth and stability. The main challenges include water management, deforestation and land degradation, air pollution, and climate change (Lee and Pang 2015). In several major cities in China, air and water pollution presents a growing health risk. Pollution levels have also risen in Myanmar, Vietnam, Thailand, and Cambodia since 2010.

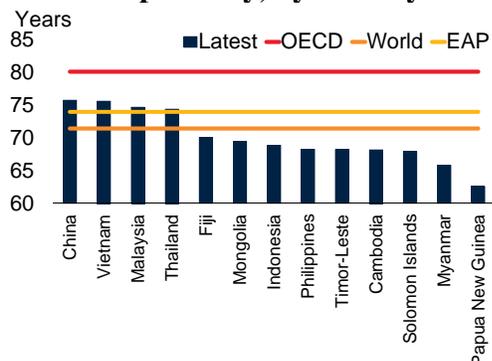
Figure 8. EAP: Health and education

East Asia and the Pacific made great progress towards education and human development outcomes, including child survival, nutrition and education outcomes. Despite clear progress in the region, some countries still face significant challenges and serious education and human-resource shortfalls.

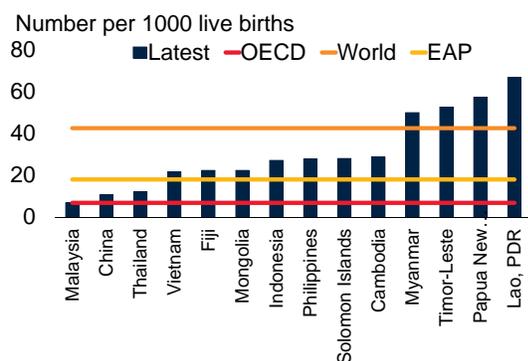
A. Health expenditure



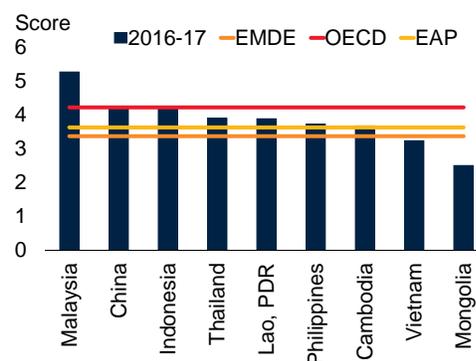
B. Life expectancy, by country



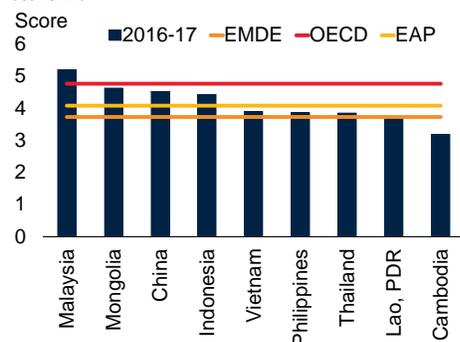
C. Under-5 mortality rate



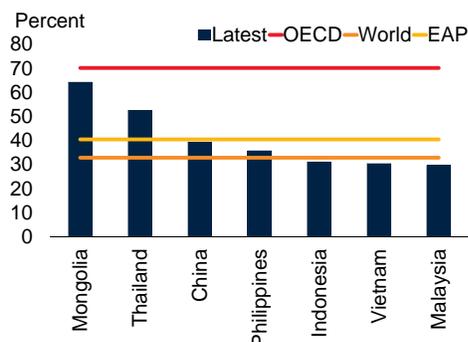
D. Quality of math and science education



E. Country capacity to retain or attract talent



F. Tertiary gross enrollment ratio



Sources: Haver Analytics; World Development Indicators, World Bank; World Economic Forum.

A.B.F. Latest data are for 2014.

C. Probability of dying between birth and exactly five years of age expressed per 1000 live birth. Latest data are for 2015.

D.E. The score is from 1 to 7. Higher value means the country is in a good performance. The OECD and EMDE average is the simple average of all the countries in the subgroups.

II.3. Which policies can help address investment needs in the EAP region?

Greater spending efficiency will help increase the benefits of public investment. Private sector participation can help improve efficiency, and at the same time provide funding. Several reforms can help realize the potential benefits of public-private-partnerships. Governments can centralize agencies that coordinate national infrastructure, in cooperation with the private sector and multilateral agencies. Multilateral development banks can work with the private sector to provide quality and governance assurances. Standardization and a global “code of conduct” can enhance confidence in the private sector as a good partner. This could include a regulatory framework, transparency principles, and a system for dispute resolution (McKinsey 2013).

Confidence in the business environment is central to encouraging private investment. Measures to improve the environment include cutting red tape, clarifying laws and regulations, allowing greater market access to foreign companies, opening more investment areas to private enterprise (especially in services sectors), and cutting financing costs. Reforms to deepen capital markets and to strengthen banking systems (e.g., through faster and more effective insolvency procedures) can encourage private financing.

In education, policy priorities include a focus on developing skills that are a high priority in labor markets, keeping in mind that requirements differ across country and sector. Primary and secondary education must focus on quality and on learning outcomes, and on building effective educational systems based on autonomy and accountability. The relevance of higher education, vocational education, and training can be improved by giving institutions the capacity and incentives to meet labor market demand, and by providing information to improve the matching between job openings and the skills of prospective workers (World Bank 2014a). In health, ensuring access to good quality services, without imposing financial hardship, will entail reforms to the insurance regime, and a shift of focus from hospitals toward high-quality primary care.

The complexity of environmental challenges in the region underlines that there are no easy or universal solutions to these problems. However, a number of initiatives would be appropriate. These include a focus on common benefits; emphasis on stakeholder participation; commitment to scientific and technological research; emphasis on long-term planning; reforms to align resource and utilities pricing with cost, including externalities; improvements in governance and general institutional capacity; and a strengthening of regionally coordinated approaches and international support (Anbumozhi and Ponciano 2015).

Investment growth in EAP is unlikely to revert to the high rates of the previous decade. Demands for capital formation in the region will nevertheless remain relatively high, and governments and multilateral agencies will remain important providers of funding. The establishment of the Asia Infrastructure Investment Bank provides a new source of funding. In March 2016, the Japan International Cooperation Agency signed an agreement with the Asian Development Bank to establish a new \$1.5 billion fund to support private infrastructure investments across the Asia-Pacific region. In order to have the desired impact, it is important that investments go to economically viable projects. Close coordination of regional and global initiatives will help reduce duplication and inconsistencies in public investment projects (BMI 2016).

III. Europe and Central Asia

Europe and Central Asia (ECA) accounted for 5 percent of global investment during 2010-15. Investment growth in the region decreased sharply, from a 10.2 percent in 2010 to 0.4 percent in 2015. Partial data for 2016 suggest that investment is bottoming out in 2016, led by easing investment contractions in Russia and Ukraine. However, regional investment growth remains well below its long-term (1995-2008) average of 6.5 percent a year.

The slowdown in investment growth in the ECA region was initially concentrated in the Central Europe in the aftermath of the Euro Area's debt crisis of 2011-12 and associated recession. The post-crisis recovery in Central Europe was weak, reflecting impaired banking systems and corporate sectors in the aftermath of the Euro Area crisis. Lingering concerns about armed conflict and related geopolitical tensions (Russia, Ukraine), policy uncertainty in several major regional economies, and adjustment to the terms-of-trade shock in energy exporters (Russia, Azerbaijan, Kazakhstan) have weighed on regional investment growth.

Meanwhile, current and prospective investment needs are sizable. Investment and major reforms are needed to increase productivity and set the stage for a sustained growth recovery. However, efforts to address under-investment are likely to be constrained by the need for sustainable financing.

III.1. How has investment growth in the ECA region evolved?

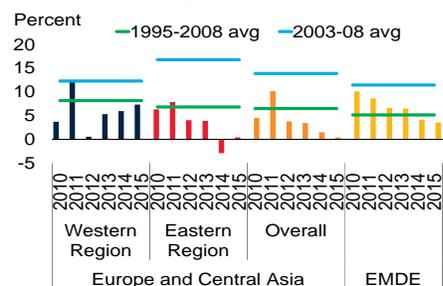
The recent investment growth slowdown was sharp and broad-based. In 2015, investment growth remained below its long-term averages in three-quarters of the countries in the region, and was negative in one-quarter of them, including Belarus, Russia, and Ukraine (Figure 9). Between 2010 and 2015, investment growth trends differed markedly between commodity importers, which are located in Central, Eastern, and Southeastern Europe, and commodity exporters, mainly Russia and the economies of Central Asia.

The overall slowdown was partly a correction from historically high investment growth prior to the global financial crisis. Pre-crisis, large capital inflows and credit booms fueled investment growth in the western part of the region as financial systems became more integrated with those in the Euro Area. Proximity to, and rapid convergence with, the Euro Area appeared to promise bright growth prospects as regional labor and product markets became increasingly intertwined (World Bank 2010). In the eastern part of the region, pre-crisis investment growth was buoyed by resource development encouraged by high global commodity prices.

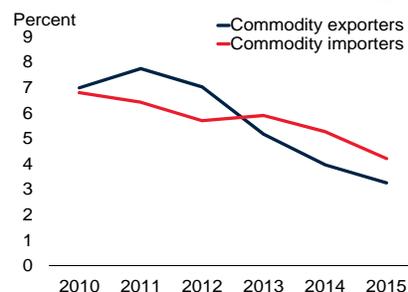
Figure 9. Investment growth slowdown in Europe and Central Asia, 2010-15

Regional investment growth declined from 10.2 percent in 2011 to 0.4 percent in 2015. Initially, the decline was concentrated in the western part of the region and reflected spillovers from the Euro Area crisis. The recovery of investment growth in the western part of the region in 2014-15 was outweighed by a contraction in oil-exporting economies in the eastern part of the region, which suffered a major terms-of-trade shock after the oil price drop. Recession in Russia was exacerbated by international sanctions.

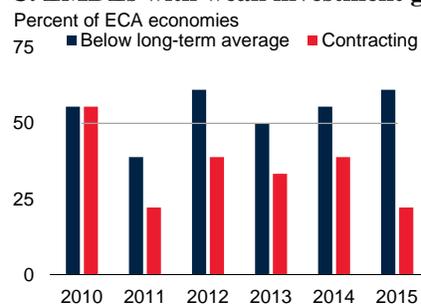
A. Investment growth by region



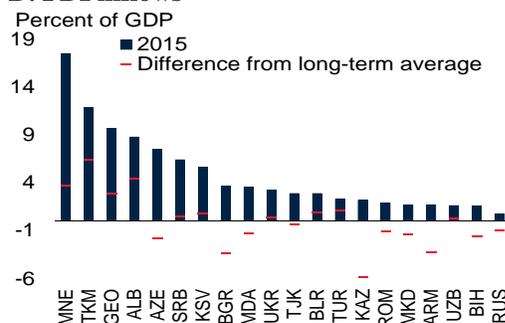
B. Five-year-ahead investment growth expectations



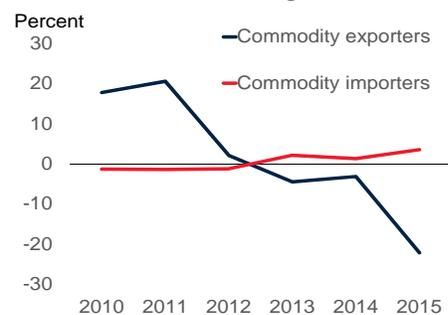
C. EMDEs with weak investment growth



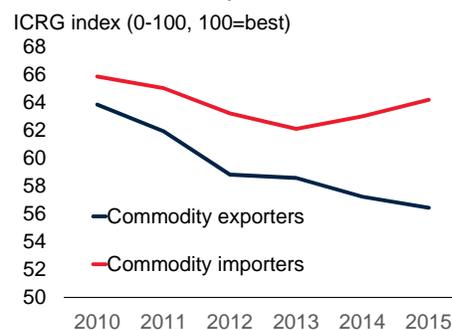
D. FDI inflows



E. Terms of trade change



F. Political stability



Sources: Consensus Economics, EBRD (2015a), Eurostat, Haver Analytics, PRS Group, World Bank.

A.C. Investment growth rates are weighted averages of gross fixed capital formation growth rates in the public and private sectors, respectively, in constant 2005 U.S. dollars.

A. The eastern part of the region comprises Eastern Europe (Belarus, Moldova, and Ukraine), South Caucasus (Armenia, Azerbaijan and Georgia), Central Asia (Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan) and Russia. The western part of the region includes Central Europe (Bulgaria, Croatia, Hungary, Poland and Romania) and the Western Balkans (Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, and Serbia), and Turkey.

B. Five-year ahead consensus forecasts as of the latest available month in the year denoted.

C. Share of ECA economies with investment growth below its long-term average or negative.

D. MNE = Montenegro, TKM = Turkmenistan, GEO = Georgia, ALB = Albania, AZE = Azerbaijan, SRB = Serbia, KSV = Kosovo, BGR = Bulgaria, MDA = Moldova, Republic of, UKR = Ukraine, TJK = Tajikistan, BLR = Belarus, TUR = Turkey, KAZ = Kazakhstan, ROM = Romania, MKD = FYR Macedonia, ARM = Armenia, UZB = Uzbekistan, BIH = Bosnia and Herzegovina, RUS = Russia.

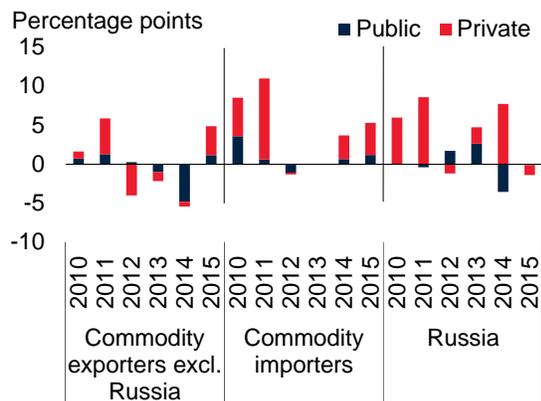
E. Investment-weighted average. A decline denotes a terms of trade deterioration.

F. Investment-weighted average. A higher index denotes greater political stability.

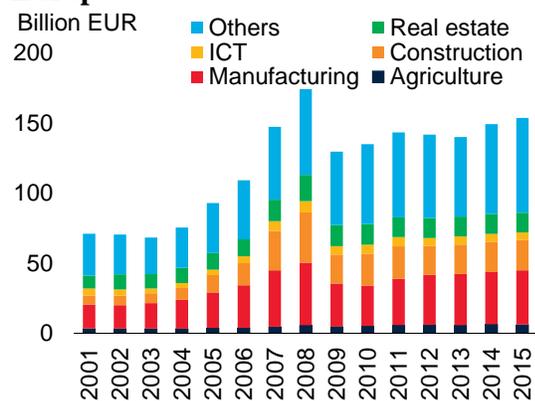
Figure 10. ECA: Investment decomposition, 2010-15

After the global financial crisis, public investment growth slowed or turned negative across the region. In Central Europe, the slowdown in investment was driven mainly by weak manufacturing sector investment.

A. Contributions to investment growth



B. Contribution to investment in Central Europe



Sources: Haver Analytics, International Monetary Fund, World Bank.

A. Investment growth rates are growth rates of subgroup aggregated gross fixed capital formation in constant 2010 U.S. dollars.

B. EU4 (Bulgaria, Hungary, Poland, Romania). Sectorial allocation of investment is not available for other countries.

In general, in *commodity-importing EMDEs* in the region, investment financing became difficult to obtain from domestic banking sectors that were still healing from the crisis and pre-crisis credit booms (Hungary, Moldova, Serbia). The 2012-13 debt crisis and subsequent weak growth prospects in the Euro Area weighed on investor sentiment. Weak trade growth and lower capital inflows reduced prospects for strong investment returns and increased financing costs. Net capital inflows exceeded 10 percent of GDP before the crisis but have been negative since 2013 in the Central and Southeastern Europe. Large foreign currency-denominated debt amplified the damage to the banking sector (EBRD 2015a). In some countries, this was compounded by policy uncertainty and lack of public investment (Figure 10). The recovery in investment in commodity-importing economies has been gradual since 2013, despite support from accommodative monetary and fiscal policies in some countries, and sharply lower oil prices that lifted business confidence and real incomes.

In *commodity-exporting EMDEs*, the global financial crisis-related fiscal stimulus supported double-digit investment growth in 2010. Investment growth remained robust until 2013, but slowed sharply once oil prices started sliding in 2014. Since mid-2014, investment has contracted year-on-year in every quarter, weighed down by the following factors: the unfolding conflict in Ukraine, intermittent border tensions in the Caucasus, international sanctions that heavily restricted access to finance in Russia, a severe terms-of-trade shock that hit energy exporters (Azerbaijan, Kazakhstan, Russia), and contracting public sector investment. Neighboring countries suffered from spillover effects, including weaker trade, remittances, and FDI (World Bank 2016c).

III.2. What are current and prospective investment needs in the ECA region?

Infrastructure needs are sizable across the ECA region. The additional investment needed to reach the investment levels of economies at similar stages of development has been estimated at 1.3 percent of GDP per year, on average (EBRD 2015a; Figure 11).⁶ Investment priorities vary widely across the region (Figure 12).

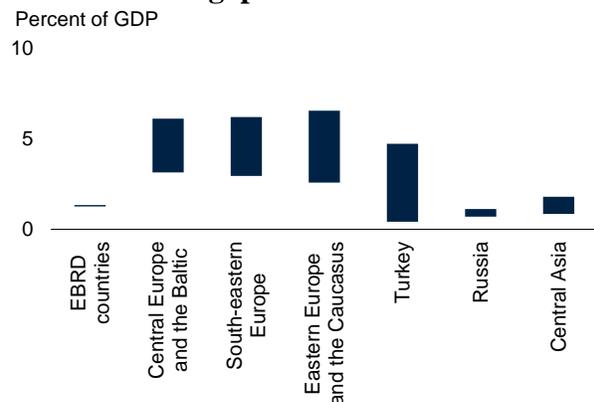
- *Russia* has implemented important upgrades in certain types of infrastructure, especially railways, mobile-cellular telephone networks, and airlines. However, the overall quality of infrastructure lags many EMDEs at similar levels of development. Roads, port and air transport infrastructure, and electricity supply all need considerable upgrading. The energy extraction sector requires an estimated \$1.9-3.3 trillion in investment between 2014 and 2035, while the power generation sector requires \$600 billion (International Energy Agency 2014; Russian Investment Agency 2015).
- Infrastructure in *Turkey* exceeds average EMDE quality, but it has come under pressure as strife in neighboring countries has brought waves of immigrants: Turkey currently accommodates about 56 percent of all registered Syrian refugees. Annual energy investments of \$12 billion are required to meet the country's development goals, to diversify the sector, and to help narrow Turkey's current account deficit by reducing energy imports (Winrow 2015; Republic of Turkey, Ministry of Energy and Natural Resources 2014). Turkey plans to increase renewable sources of energy, including nuclear, and improve energy efficiency (EBRD 2015b). From 2014 to 2018, total infrastructure investment needs are estimated at \$350 billion (EBRD 2015b).
- For landlocked *Central Asia*, developing and upgrading infrastructure are critical for connectivity and reducing dependence on extractive industries. Investment in the energy sector will help to improve electricity access, a major concern for business (ADB 2016). Waste water systems in rural areas are also underfunded.
- In *other countries* in the ECA region, port, road, and railway infrastructure needs improvement, and logistics infrastructure needs to be upgraded to foster trade and investment (Bosnia and Herzegovina, Bulgaria). Border bottlenecks should be addressed and customs infrastructure improved. Upgrading water supply and irrigation systems will enhance productivity in agriculture and reduce environmental degradation (Azerbaijan, Bosnia and Herzegovina, Serbia, Uzbekistan).

⁶ In addition to 24 countries in ECA region, the estimate includes the Arab Republic of Egypt, Estonia, Jordan, Latvia, Lithuania, Mongolia, Morocco, the Slovak Republic, Slovenia, and Tunisia.

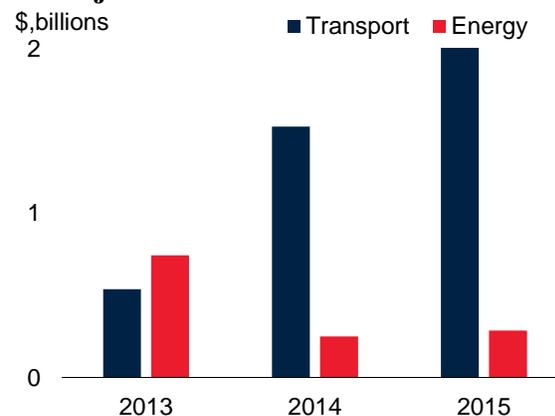
Figure 11. ECA: Investment gaps and projects

Amid sizable investment gaps across the region, large-scale infrastructure investment projects are underway.

A. Investment gaps



B. Projects in Central Asia



Sources: Central Asia Regional Economic Cooperation (CAREC), European Investment Bank.

A. Range of different investment gap estimates for each region from EBRD (2015a). EBRD countries include Estonia, Latvia, Lithuania, the Slovak Republic, Slovenia, Mongolia, Egypt, Jordan, Morocco, and Tunisia in addition to 24 countries in ECA. Financing gap for Central Asia and the Caucasus includes all infrastructure financing requirements that are not covered by national governments. For Central Asia, the range is GDP weighted average for Azerbaijan, Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, and Uzbekistan.

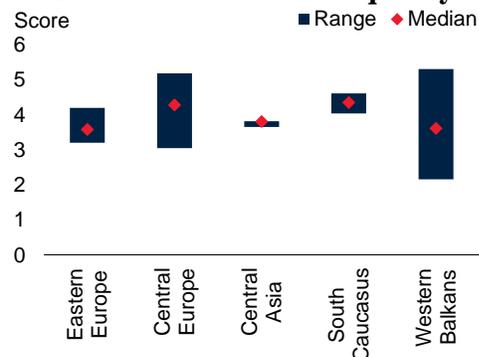
Initiatives are already underway to improve infrastructure in the region:

- In *Russia*, several hundred infrastructure projects were announced in the past five years, with more than half scheduled for completion by 2020. These projects are mostly in more densely populated western Russia. The largest allocations are for transport infrastructure (especially high-speed rail, and road and bridge construction). But there are also a large number of projects underway to improve the supply of utilities (electric power, gas, and water).
- *Turkey* has initiated several public-private partnership projects, including the Caspian and Middle Eastern oil and gas pipeline and the \$10.2 billion Istanbul Grand Airport. *Countries in Central Asia*—aspiring to become an overland transit and energy hub linking Chinese and European markets—has initiated investment projects in energy and transport sectors. In the energy sector, major projects include a pipeline from Turkmenistan to India, gas sector development in Uzbekistan, and hydroelectric power in Tajikistan. In the transport sector, key projects include highways in Kazakhstan, railroads linking Tajikistan and Kyrgyz Republic to China and the Islamic Republic of Iran, ports in Turkmenistan and Kazakhstan, and an airport in Kyrgyz Republic.
- In *Central and South Eastern Europe*, the investment pipeline largely reflects EU funding to further integrate the EU member states of the region with Western European countries.

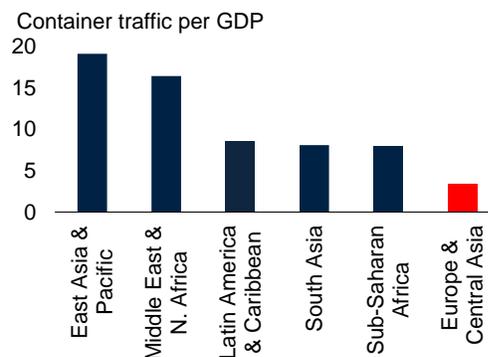
Figure 12. Infrastructure indicator

The quality of infrastructure in the most of the region is substantially below OECD average. Port container traffic is limited, highlighting the region's reliance on road, air, and rail transport. The quality of air and road transport infrastructure remains well below the OECD average in most of the region. The region is energy intensive and heavily reliant on non-renewable energy.

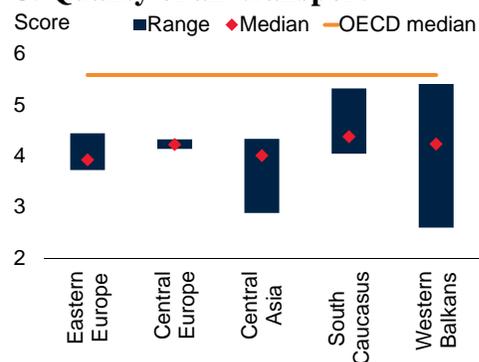
A. Overall infrastructure quality



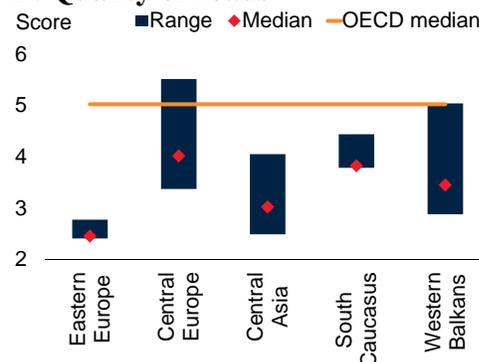
B. Port container traffic



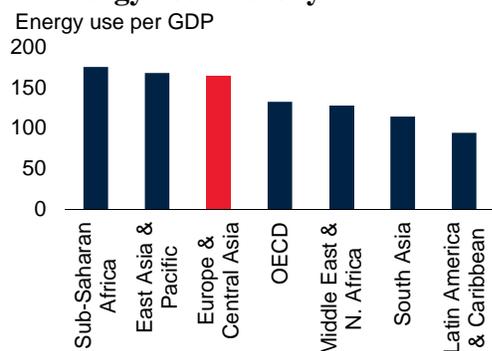
C. Quality of air transport



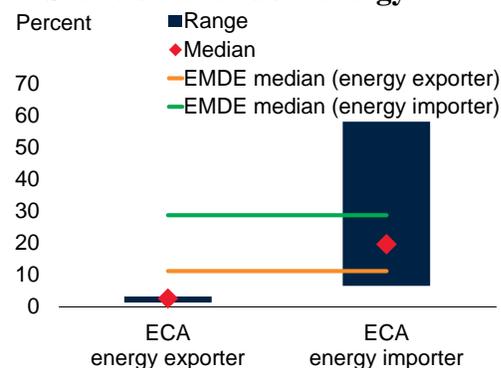
D. Quality of roads



E. Energy use intensity



F. Share of renewable energy



Sources: EBRD (2015a), Haver Analytics, World Bank, World Economic Forum.

A. The score is overall quality of infrastructure. The score from 1 to 7 (best). Investment is the share of fixed capital formation as a percent of GDP. OECD average is the average investment share of OECD countries from 1990 to latest.

B. Sum of container port traffic (TEU: 20 foot equivalent) per current U.S. dollar GDP in millions in 2014.

C.D. The score is from 1 to 7 (best). The OECD and EMDE average are the simple average of all the countries in the respective subgroupings.

E. Regional aggregates. Data are for 2014 or latest available. GDP data are in constant 2011 “international dollars.”

F. Share of renewable energy consumption as percent of total final energy consumption in 2012. EMDE averages are the simple average of all the countries in the respective subgroupings.

Climate adaptation and energy efficiency. ECA is an energy-intensive region that relies heavily on non-renewable energy. Belarus, Bosnia and Herzegovina, and Turkey are implementing policy reforms (such as cost-based energy pricing) and investments in both public infrastructure and private industry, including renewable energy and energy efficiency, in partnership with the World Bank. Efforts to adapt to climate change include improved water resource management (flood protection, water loss reduction, irrigation efficiency) in Kazakhstan; climate-smart agriculture (switching to more resilient crops) in Tajikistan; and better weather forecasting and climate change monitoring in Russia.

Education and health. The region has made significant advances in the area of human development, including reductions in child mortality rates. Many countries in the region have achieved universal primary enrollment and gender parity in both primary and secondary education, and literacy rates are high (Figure 13). On average, the ECA region scores above average among EMDE regions in several education and health indicators. Nevertheless, shortcomings remain. Levels of learning achievement are low in several countries, and socio-economic and ethnic disparities in education persist. Among the basic education indicators, regional gaps are most apparent for math and science education. The region scores well below the EMDE average on attracting and retaining talent. Building a highly skilled workforce will require improving the quality of education, investing in on-the-job training, and using talent more effectively.

III.3. Which policies can help address investment needs in the ECA region?

Unmet investment needs, along with governance, financial, and labor market obstacles, limit output growth in the region (World Bank 2015d-g; World Bank and Vietnam 2016; World Bank 2016c; EBDR 2015a). While policy priorities depend on country circumstances, appropriate cyclical and structural policies are needed in all cases to raise investment growth. Fiscal policy could help most directly by expanding public investment while monetary policy could boost activity by lowering financing costs. Structural reforms could address factors holding back private investment, including by boosting productivity and aggregate growth prospects and improving the business climate.

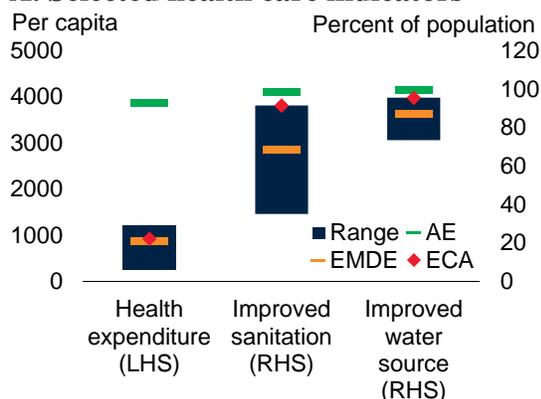
This constrains their ability to finance public investment and places a premium on reforms that encourage private investment. Only a few regional economies can tap debt markets to finance infrastructure, while weak domestic banking systems and underdeveloped capital markets restrict the ability of governments to borrow domestically.

With weak growth, limited fiscal resources, and net capital outflows, the gap between infrastructure needs and the ability of governments to meet those needs may widen. This places a premium on measures to improve investment efficiency and to obtain funding from multilateral sources or the private sector.

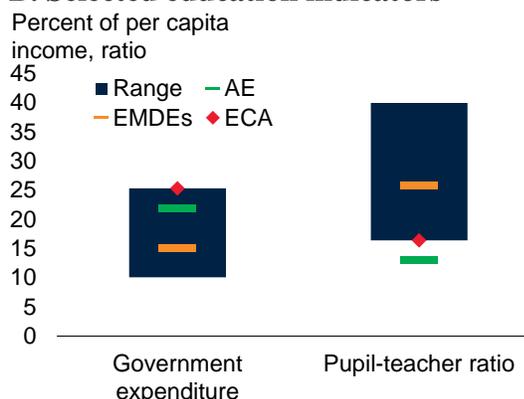
Figure 13. Human development indicators

Health and educational expenditure is highest among EMDE region and close to the OECD average. The region made significant advances in the area of human development. Nevertheless, important shortcomings remain. Among the basic education indicators, the region scores below the OECD average in math and science outcomes. The region also lags behind both the OECD and the EMDE average in attracting and retaining talent.

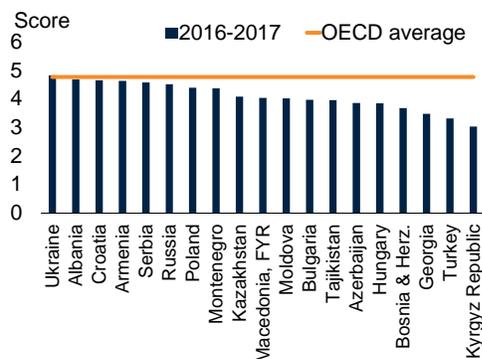
A. Selected health care indicators



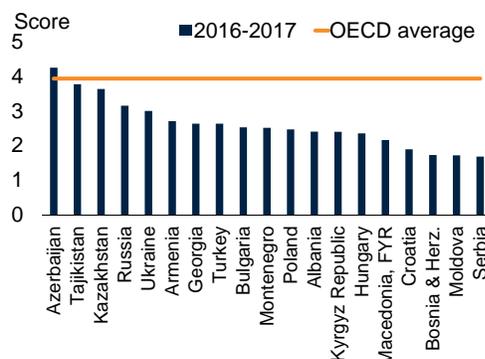
B. Selected education indicators



C. Math and science outcomes



D. Attracting and retaining talent



Sources: Haver Analytics, World Bank, World Economic Forum.

A. Blue bars denote range of unweighted regional averages across EMDE regions. Health expenditure per capita in purchasing power parity terms, unweighted averages of 199 EMDEs, 34 AEs, and 19 ECA economies. Access to improved sanitation facilities (in percent of population), unweighted averages for 150 EMDEs, 33 AEs, and 22 ECA economies. Access to improved water sources (in percent of population), unweighted averages for 148 EMDEs, 34 AEs, and 22 ECA economies. Latest data available during 2011-15.

B. Blue bars denote range of unweighted regional averages across EMDE regions. Government expenditure per primary student (in percent of per capita income), unweighted averages of 87 EMDEs, 32 AEs, and 10 ECA economies. Pupil-teacher ratio in primary education (headcount basis), unweighted averages for 165 EMDEs, 31 AEs, and 20 ECA economies. Latest data available during 2011-15.

C.D. The score is from 1 to 7 (best). The OECD and EMDE average are the simple averages of all the countries in the respective subgroupings.

E. Regional aggregated number. Data are for 2014 or latest available. GDP data are in constant 2011 “international dollars.”

F. Share of renewable energy consumption as percent of total final energy consumption in 2012. EMDE averages are the simple average of all the countries in the respective subgroupings.

Many EMDEs in the ECA region remain under pressure to consolidate their fiscal positions to reduce high debt-to-GDP ratios and ensure long-term fiscal sustainability (Georgia, Hungary).

Investment efficiency. Effective public investments can meet needs with less cost (Dabla-Norris et al. 2012), but regional institutional capacities fall behind the standards in advanced economies in this area (Figure 14). The eastern part of the ECA region ranks particularly low in relevant measures, including social stability, government effectiveness, and corruption. The efficiency of investments can be enhanced through a strategic, rigorous and transparent project selection mechanism and through strong institutions able to fund, manage, execute and monitor project implementation.

Private funding. Policy efforts can be geared toward developing private funding sources for investment. Many countries still lack adequate frameworks for effective public-private partnerships, which can improve the effectiveness of public investment (Engel, Fischer, and Galetovic 2014). Capital market reforms can help channel domestic savings towards private investment (EBRD 2015a).

Multilateral funding sources. The region, especially the South Caucasus and Central Asia, will continue to depend on financial support from multilateral development institutions such as the European Bank for Reconstruction and Development, the Asian Development Bank, and the World Bank. Countries in Central Asia will likely be the largest beneficiaries of China’s “One Belt, One Road” (OBOR) initiative, due to their locations and natural resource abundance. EU structural funds will continue to play an important role in closing investment gaps in Central and South Eastern Europe.

IV. Latin America and the Caribbean

Latin America and the Caribbean (LAC) accounted for 7 percent of global investment in 2010-15.⁷ During this period, investment growth slowed sharply in the region, from about 12.5 percent in 2010 to -4.8 percent in 2015, well below its long-term (1990-2008) average of 4.6 percent. Regional investment is projected to decline further, by more than 1 percent, in 2016.

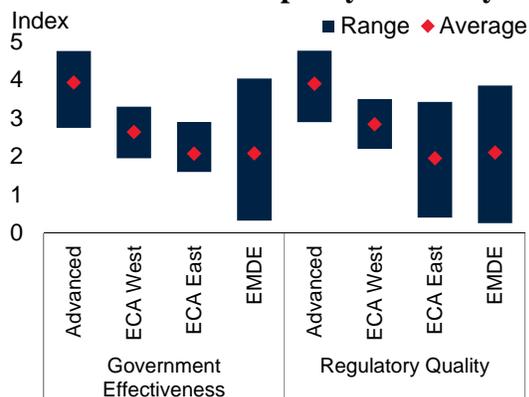
The decline in investment growth in the LAC region in 2010-15 was concentrated in commodity exporters. It reflected domestic macroeconomic challenges, a sharp terms-of-trade deterioration resulting from declines in global commodity prices, and slowdowns in economic growth, with outright recessions in some cases. Current and prospective investment needs are sizable, especially in education and infrastructure.

⁷ Throughout this section, unless otherwise specified, investment refers to real gross fixed capital formation (public and private combined). For the sake of brevity, “investment” is understood to indicate investment levels. Investment growth is measured as the annual percent change in real investment.

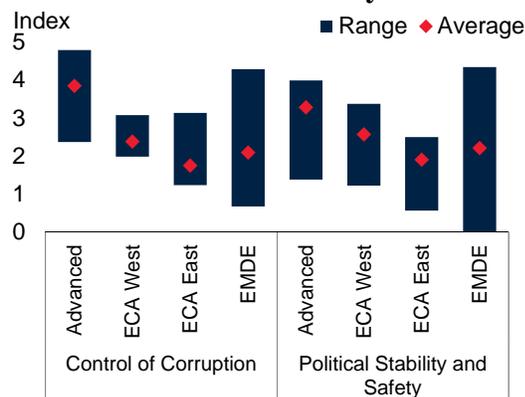
Figure 14. Institutional quality

Various measures of institutional efficiency in the ECA region are below the advanced-economy average. The western part of the region performs better than the eastern part on every measure. Governance and stability indicators in the eastern part of the region are often worse than the EMDE average.

A. Government and policy efficiency



B. Governance and stability



Source: World Bank.

A.B. The blue bars mark the range. ECA is Europe and Central Asia. The eastern part of the region comprises Eastern Europe (Belarus, Moldova, and Ukraine), South Caucasus (Armenia, Azerbaijan and Georgia), Central Asia (Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan) and Russia. The western part of the region includes Central Europe (Bulgaria, Croatia, Hungary, Poland and Romania) and the Western Balkans (Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, and Serbia), and Turkey. Scores range from 0 (not efficient) to 5 (efficient). Data for 2015 or latest available.

IV.1. How has investment growth evolved in the LAC region?

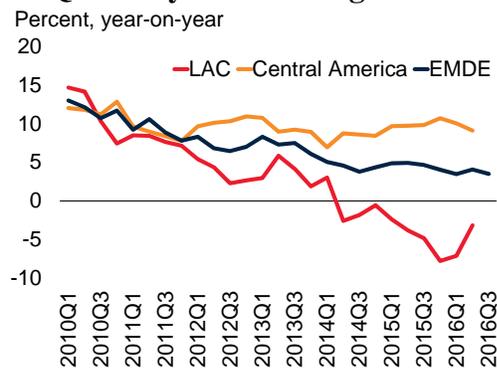
The LAC region accounted for 7 percent of global investment during 2010-15, less than LAC's 8 percent share of global output. This investment underperformance reflects low investment-to-GDP ratios in LAC, averaging around 22 percent during 2010-15, significantly below the EMDE average of 32 percent. Current private investment-to-GDP ratios have fallen below levels prior to the global financial crisis (IMF 2015b).

Regional investment has contracted since 2014 amid deep recessions in several of the region's largest economies (Argentina, Brazil, República Bolivariana de Venezuela) and growth slowdowns in the rest of the region (Figure 15). In 2015, investment growth was below its long-term average in two-thirds of LAC economies and negative in one-third of them (Brazil, Chile, Ecuador, Jamaica, and Peru). Preliminary data point to a further investment decline in the first half of 2016.

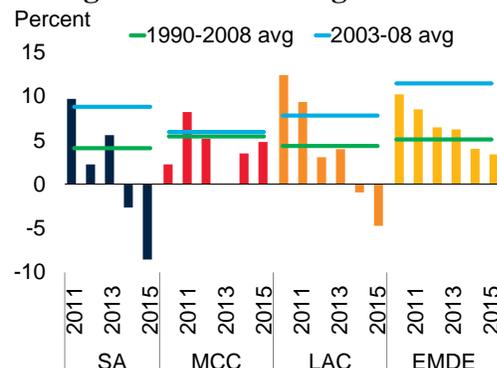
Figure 15. LAC: Investment growth slowdown

Partly due to weak overall economic growth, investment growth slowed sharply during 2010-15. The investment slowdown was broad-based across various sectors and across both private and public investment. Investment growth is expected to remain low and may decline further in the short to medium term.

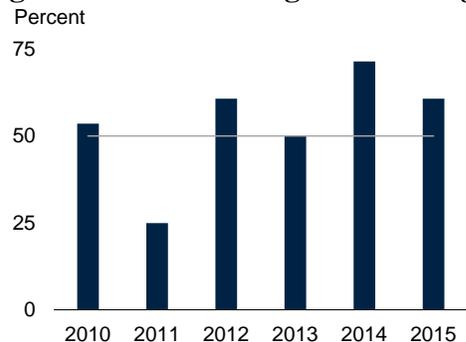
A. Quarterly investment growth



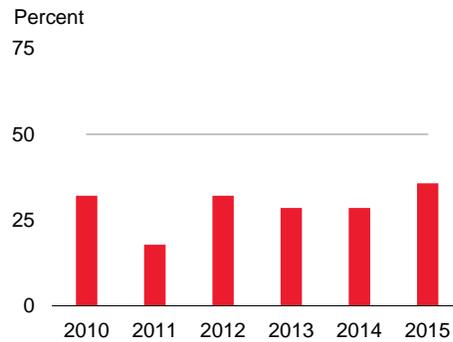
B. Regional investment growth



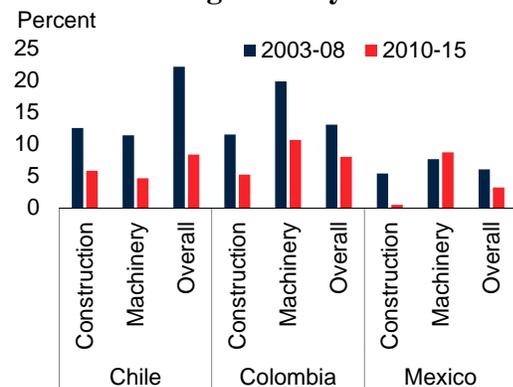
C. Share of countries with investment growth below its long-term average



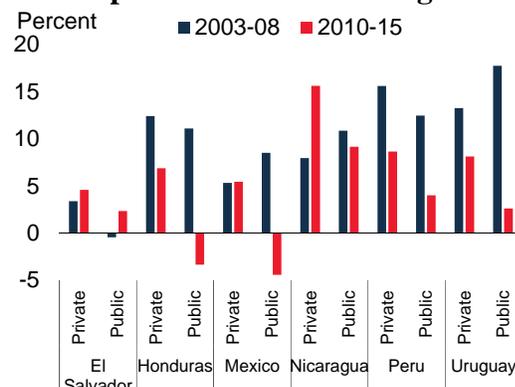
D. Share of countries with contracting investment



E. Investment growth by sectors



F. Composition of investment growth



Sources: Haver Analytics, International Monetary Fund, Oxford Economics, World Bank.

A. GDP-weighted averages. Includes quarterly data for Bolivia, Brazil, Chile, Colombia, Costa Rica, Guatemala, Mexico, Nicaragua, Paraguay, Peru, and Uruguay. Central America includes Costa Rica, Guatemala, Mexico, and Nicaragua.

B. Averages weighted by investment levels. "SA" stands for South America. "MCC" stands for Mexico, Central America, and the Caribbean.

E. For Chile, 2003-08 data begins in 2004.

F. Figure shows growth rates of gross fixed capital formation in constant 2010 U.S. dollars.

The declines mark a sharp reversal of the region's robust investment growth before 2010, when LAC countries were buoyed by robust overall growth prospects, still-elevated commodity prices, and relative political stability in the region. During 2010-15, investment growth averaged 3.9 percent, significantly below the 7.8 percent average during 2003-08. The recent weakening of investment growth has returned investment-to-GDP ratios near their levels in the early 2000s. The slowdown in investment growth has been broad-based across various sectors, and across public and private investment. In light of the weakened economic growth prospects for the region, investment growth is expected to remain low in the short to medium term.

South America, with a large share of commodity exporters, experienced the sharpest downturn in investment growth in the LAC region as these economies' terms of trade deteriorated sharply (World Bank 2016d). Investment in Mexico and many other countries in Central America has been more robust as reform agendas, especially in Mexico, have bolstered confidence. Investment growth has also picked up in the Caribbean, partly due to strong construction growth supporting the tourism sector.

The post-crisis slump in commodity prices and associated deterioration in the terms of trade triggered sharp investment drops in commodity-producing sectors, in particular mining, across the region (World Bank 2016e; Figure 16). Investment also declined in non-commodity-producing sectors. Public investment was curtailed as fiscal revenues shrank and fiscal deficits widened as a result of lower commodity prices and slowing growth. Private investment declined as investor confidence in growth prospects waned, especially among major commodity exporters (IADB 2016, IMF 2015a). Political and policy uncertainty has also dampened investor confidence and discouraged investment expenditures in several countries in recent years (Argentina, Brazil, Haiti, República Bolivariana de Venezuela) (IMF 2016a).

Tightening financing conditions in the region further weighed on investment. As the U.S. Federal Reserve began to reduce monetary accommodation in 2014-15, currencies of major commodity exporters in the region depreciated against the dollar, some by around 30 percent in 2015 (Brazil, Colombia). Coupled with severe weather conditions that affected domestic food supplies, upward pressures on inflation led some central banks in the region, especially in South America, to raise interest rates in 2015-16 to contain price rises despite weak output growth (Argentina, Brazil, Chile, Colombia), further dampening investment growth.

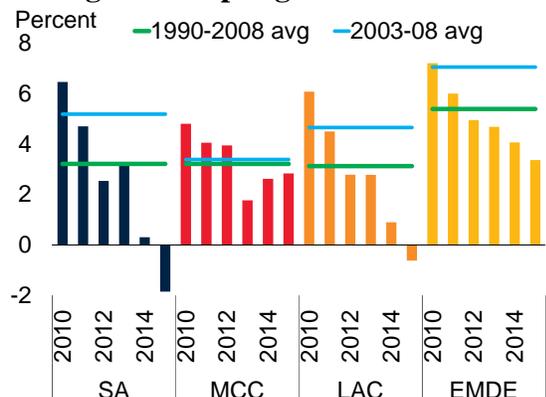
IV.2. What are current and prospective investment needs in the LAC region?

Investment needs in the region remain significant. The low quality of infrastructure and poor skills of the labor force are bottlenecks to the achievement of faster productivity growth, for example in Brazil (World Bank 2016d), and to poverty reduction. Infrastructure has not kept pace with urbanization in the region (IADB 2010), while the majority of the poor in LAC are in urban areas. Immediate needs for investment in infrastructure and education have also been identified in country studies of Belize, Bolivia, Colombia, Costa Rica, El Salvador, Guatemala, Haiti, Honduras, Panama, and Uruguay (World Bank 2015h-p, and 2016e).

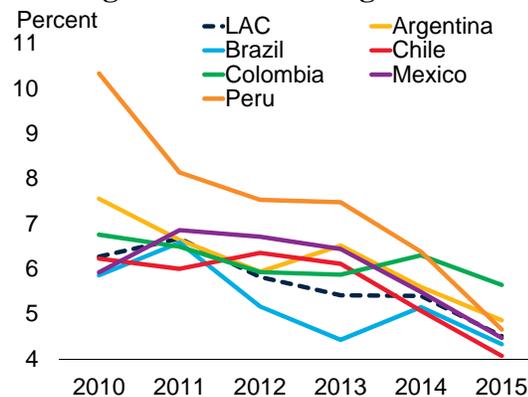
Figure 16. LAC: Correlates of investment growth slowdown

The investment slowdown has coincided with severe terms-of-trade deteriorations, sharp output growth slowdowns, slowing FDI inflows, political tensions, and domestic policy tightening. Over the medium term, investment growth is expected to remain low.

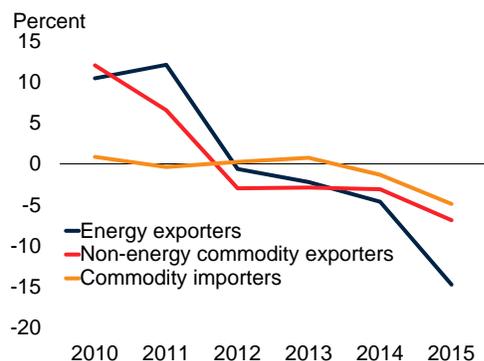
A. Regional output growth



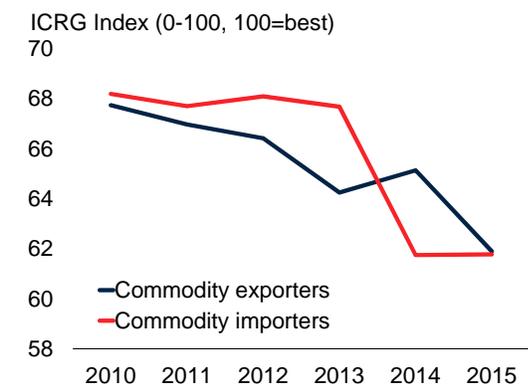
B. Long-term investment growth forecasts



C. Terms of trade changes



D. Political stability



Sources: Haver Analytics, Consensus Economics, World Economic Forum (2016), World Bank.
 A. GDP-weighted averages. SA is South America. MCC is Mexico, Central America, and the Caribbean.
 B. Five-year ahead consensus forecasts for investment growth.
 C. GDP-weighted average annual change in terms of trade. Negative value indicates deterioration. Energy exporters include Bolivia, Colombia and Ecuador. Non-energy commodity exporters include Argentina, Brazil, Chile, Costa Rica, Guatemala, Honduras, Nicaragua, Panama, Paraguay, Peru, and Uruguay. Commodity importers include Dominican Republic, El Salvador, Haiti, and Mexico.
 D. Investment-weighted averages. A decline indicates greater political instability.

Infrastructure investment. On average across the 16 EMDEs in LAC over 2008-13, infrastructure investment amounted to just 3.7 percent of GDP, well below the 5-6 percent of GDP required just to sustain current economic growth rates (Bhattacharya, Romani, and Stern 2012; Kohli and Basil 2010; Fay and Yepes 2003; Calderón and Servén 2003; and Perrotti and Sánchez 2011). Apart from low investment levels, the quality of infrastructure in the LAC region is poor relative to that of advanced economies and Asian emerging markets. The average LAC economy ranked 82nd out of 138 economies (around the 40th percentile) on quality of infrastructure (World Economic Forum 2016; Figure 17). Priority infrastructure needs in the region include improving road conditions through maintenance and rehabilitation (Uruguay), upgrading infrastructure relating to

energy (Panama), increasing access to electricity in rural areas (Bolivia), enhancing the quality of roads and ports (Costa Rica), and reducing the prices of electricity (Costa Rica).

Education. While public education expenditure in the region is on par with the EMDE average, various metrics of the quality of education systems, such as the average student-teacher ratio, fall short of EMDE comparators. Urgent education needs include improved pre-school education and access to early childhood education; better teacher training and quality; and a reorientation of education programs towards employer needs, such as information technology and English language skills (Belize, Bolivia, Costa Rica, El Salvador, Guatemala, Panama).

Public health. The region's public health expenditures are slightly above that of EMDE comparators. Health infrastructure, such as access to improved sanitation and improved water sources, exceeds that of EMDE peers. However, urgent health care investment needs remain (World Bank 2015i, m). These include tackling malnutrition (Guatemala), increasing access to improved sanitation in rural and urban areas, and access to specialized health care services for women and children (Bolivia).

IV.3. Which policies can help address investment needs in the LAC region?

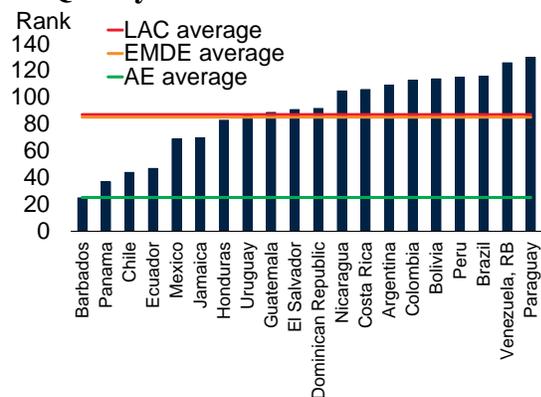
While policy priorities differ across countries, most economies in the region have limited funds to expand public investment spending. The lack of resources places a premium on the efficiency of public investment, which may be enhanced by leveraging public funds with public-private partnerships and implementing reforms to stimulate private investment.

- Strengthening the efficiency of public investment includes streamlining the process for the development, approval, and selection of projects (IADB 2016). Transparency in the project selection process and its monitoring and coordination between multiple stakeholders can help remove inefficiencies.
- Several countries have begun to develop public-private partnership frameworks (Chile, Colombia, Peru). If designed well, these can improve the efficiency of public investment spending (Engel, Fischer, and Galetovic 2014).
- LAC economies rank low on ease of business startup and tax compliance (South America and Central America), as well as trading across borders and registering property (Caribbean and South America) (World Bank 2017b). Reforms to ease these constraints can also encourage investment.

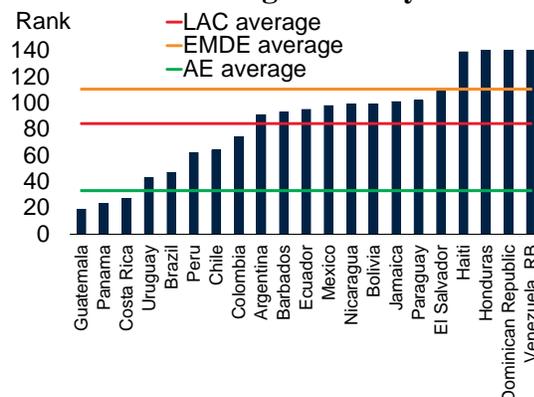
Figure 17. LAC: Investment needs

A number of LAC countries rank poorly on access to quality infrastructure. Important among current investment needs are infrastructure and education, in terms of both quantity and quality.

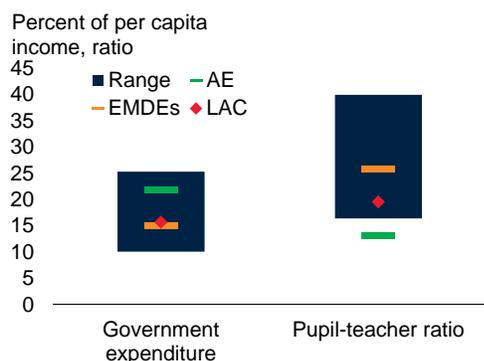
A. Quality of infrastructure



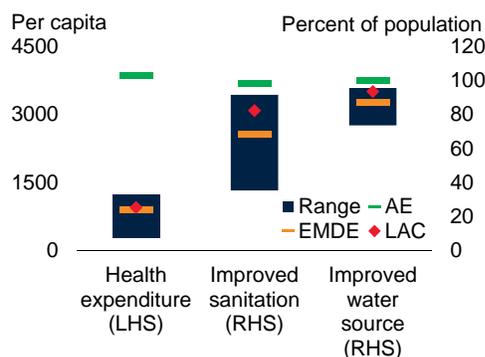
B. Ease of accessing electricity



C. Selected education indicators



D. Selected health care indicators



Sources: World Bank (2017), World Economic Forum (2016).

A. Rankings out of 138 countries.

B. Rankings out of 190 countries.

C. Blue bars denote range of unweighted regional averages across EMDE regions. Government expenditure per primary student (in percent of per capita income), unweighted averages of 87 EMDEs, 32 AEs, and 20 LAC economies. Pupil-teacher ratio in primary education (headcount basis), unweighted averages for 165 EMDEs, 31 AEs, and 23 LAC economies. Latest data available during 2011-15.

D. Blue bars denote range of unweighted regional averages across EMDE regions. Health expenditure per capita in purchasing power parity terms, unweighted averages of 199 EMDEs, 34 AEs, and 31 LAC economies. Access to improved sanitation facilities (in percent of population), unweighted averages for 150 EMDEs, 33 AEs, and 28 LAC economies. Access to improved water sources (in percent of population), unweighted averages for 148 EMDEs, 34 AEs, and 30 LAC economies. Latest data available during 2011-15.

V. Middle East and North Africa

The Middle East and North Africa (MNA) accounted for 4 percent of global investment, on average, during 2010–15.⁸ Investment growth in the region slowed from 4.4 percent in 2010 to 2.6 percent in 2015, far below the long-term (1990–2008) average of 7.2 percent, with considerable divergence among oil exporters and importers (Figure 18).

This section documents the recent slowdown in investment growth in the Middle East and North Africa due to the severe terms-of-trade deteriorations in oil-exporting economies and uncertainty associated with deep political changes in several oil-importing economies. Remaining investment needs are sizable, especially in the transport and energy sectors.

V.1. How has investment growth in the MNA region evolved?

In 2015, investment growth remained below its long-term average in 70 percent of EMDEs in the region, and investment contracted 30 percent of the EMDEs in the region. However, investment developments have diverged between oil exporters and oil importers since the broad-based slowdown in investment growth during 2010–13.

Investment growth in oil-exporting economies has evolved in line with oil prices, which rose rapidly in 2010 and 2011. When the steep oil price decline began in mid-2014, governments initially responded with additional fiscal stimulus, often in the form of public investment. As a result, investment growth in oil-exporting economies rose more than 3 percentage points in 2014, to 7.3 percent. Yet, sharp oil revenue losses and fiscal constraints brought project delays and cancellations in 2015. Investment growth fell to an average of 2.4 percent in 2015, the slowest pace since 1994, and investment contracted in three of the four largest oil-exporting economies in the region (Algeria, Islamic Republic of Iran, and Saudi Arabia). Preliminary data suggest further contraction in investment in 2016 in oil-exporting economies. For example, Saudi Arabia, the largest economy in the region, experienced a 16 percent year-on-year contraction in the first half of the year.

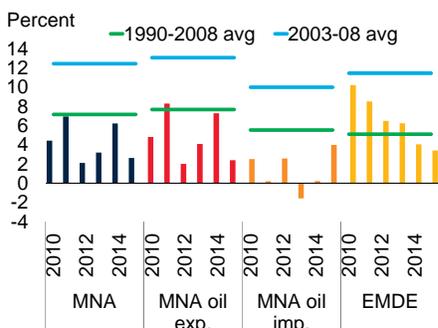
Among oil-importing countries, investment growth decelerated sharply in 2011, to 0.2 percent, when mounting political tensions during the Arab Spring were rapidly followed by an intensifying Euro Area sovereign debt crisis. The sharp recovery of investment growth in 2015, to 4.0 percent, reflected efforts to address infrastructure needs in Egypt and Morocco, the two largest oil-importing economies in the region, while investment contracted in several smaller oil importers (Jordan, Lebanon, Tunisia). The private sector contributed more strongly than the public sector to investment growth in Egypt, a typical pattern among oil importers. Even with the recovery in 2015, investment growth in oil-importing countries was still below the long-term average of 5.1 percent. Heightened balance of payments and fiscal pressures in Egypt were likely accompanied by weaker

⁸ Throughout this section, unless otherwise specified, investment refers to real gross fixed capital formation (public and private combined). For the sake of brevity, “investment” is understood to indicate investment levels. Investment growth is measured as the annual percent change in real investment.

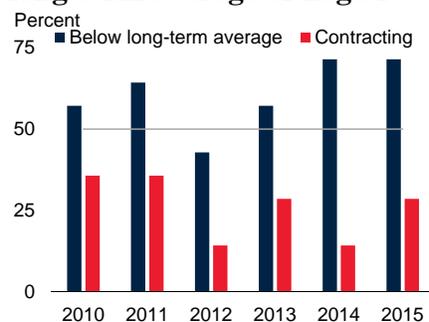
Figure 18. MNA: Investment growth slowdown

Investment growth slowed from 4.2 percent in 2010 to 0.5 percent in 2015. The slowdown reflects a severe terms-of-trade deterioration in oil exporters, spillovers from armed conflict, and political uncertainty in oil importers.

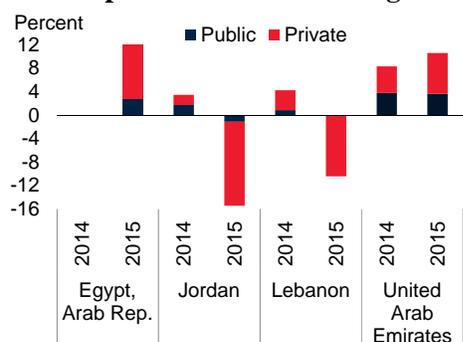
A. Investment growth



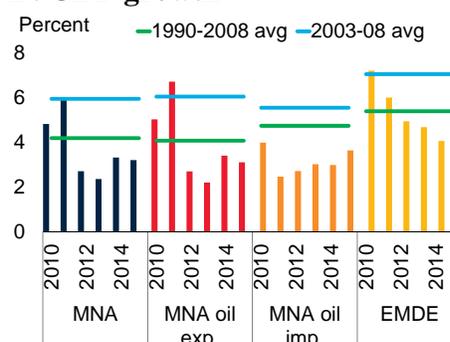
B. Economies with investment growth below long-term average or negative



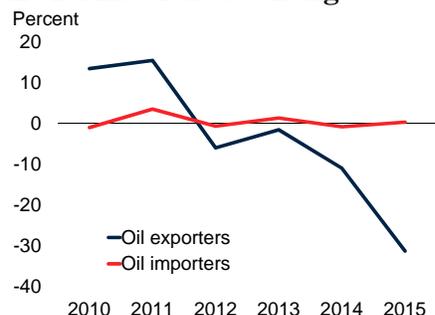
C. Composition of investment growth



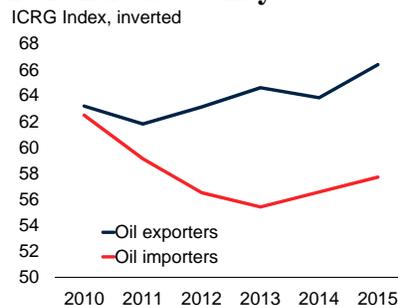
D. GDP growth



E. Terms of trade changes



F. Political stability



Sources: Haver Analytics, PRS Group, World Bank.

A. Averages weighted by investment levels. Oil exporters include Algeria, Bahrain, the Islamic Republic of Iran, Kuwait, Oman, Saudi Arabia, and the United Arab Emirates. Oil importers included Djibouti, Egypt, Jordan, Lebanon, Morocco, and Tunisia.

B. Economy coverage is the same as for panel A.

C. Figure shows growth rates of gross fixed capital formation in constant 2010 U.S. dollars.

D. Averages weighted by GDP levels. Oil exporters include Algeria, Bahrain, the Islamic Republic of Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Oil importers include Djibouti, Egypt, Jordan, Lebanon, Morocco, Tunisia, and West Bank and Gaza.

E. Investment-weighted averages. Oil exporters include Algeria, Kuwait, Oman, Saudi Arabia, and the United Arab Emirates. Oil importers include Egypt, Jordan, Lebanon, Morocco, and Tunisia.

F. Investment-weighted averages of ICRG. An increase denotes greater political stability. Oil exporters include Algeria, the Islamic Republic of Iran, Iraq, Kuwait, Oman, Saudi Arabia, and the United Arab Emirates. Oil importers include Egypt, Jordan, Lebanon, Morocco, and Tunisia.

investment growth in 2016. Recently-implemented structural reforms and expansionary policy among oil-importing countries may lift investment in the medium term, however (IMF 2016b).

A severe terms-of-trade deterioration in oil exporters, far-reaching political changes, and spillovers from armed conflict in several countries in the region weighed heavily on activity and sentiment. As growth prospects dimmed, especially among oil-exporting countries, investment growth slowed sharply across the region.

Oil-exporting countries—where oil and gas accounts for, on average, 40 percent of GDP, 70 percent of fiscal revenues, and 80 percent of goods exports—have been hard-hit by the sharp oil price decline since mid-2014. The terms of trade of oil exporters in the region deteriorated sharply between 2011 and 2015. Panel regression estimates suggest that the terms-of-trade shock accounted for nearly all of the slowdown in investment growth. A two-year growth contraction in the Islamic Republic of Iran in 2013 and 2014 also contributed to the slowdown.

In oil importers, deepening political uncertainty associated with profound institutional changes in 2011 weighed heavily on investment. Political risk deteriorated particularly sharply in Egypt and Tunisia, where civil uprisings led to regime change, and has not yet recovered to 2010 levels. Developments in the larger economies in the region had spillovers to confidence in the smaller ones (World Bank 2015q). On average, such political uncertainty may have been associated with slower investment growth of approximately 1.5 percentage points during 2011–15.

V.2. What are the remaining investment needs in the MNA region?

A ramping up of infrastructure investment is needed across MNA (Figure 19). In oil-importing and non-GCC oil-exporting countries, where the quality of infrastructure is on par with that in all EMDEs, there is significant underinvestment in the transport (in particular, roads) and electricity sectors. In Lebanon, frequent blackouts make electricity a binding constraint to competitiveness and doing business, and in recent years this was also the case in Egypt (World Bank 2015q; Le Borgne and Jacobs 2016). Large numbers of Syrian refugees in Jordan and Lebanon have compounded existing strains on infrastructure in those countries. In Syria, the cost of rebuilding infrastructure damaged or destroyed by war is estimated to be on the order of \$100–200 billion (Gobat and Kostial 2016). Iraq, as well, faces large infrastructure investment needs, which have risen as a result of conflict.

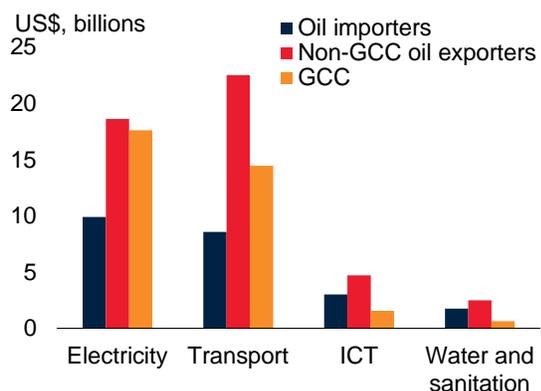
GCC countries also have outstanding infrastructure investment needs, predominantly in electricity generation. With higher income levels, however, these countries also have greater capacity to fulfill such needs (IMF 2014b). GCC countries' planned medium-term public spending on infrastructure generally tracks their infrastructure investment needs, while planned spending in oil-importing and non-GCC oil-exporting countries lags far behind needs (Ianchovichina et al. 2013).

Besides contributing to growth, higher investment in infrastructure could also help improve labor market conditions in MNA. One study estimated that each \$1 billion of infrastructure investment has the potential to generate 110,000 infrastructure-related jobs, on average, in oil-importing MNA countries (Estache et al. 2013). It is key that countries prioritize investment projects to suit country conditions, however.

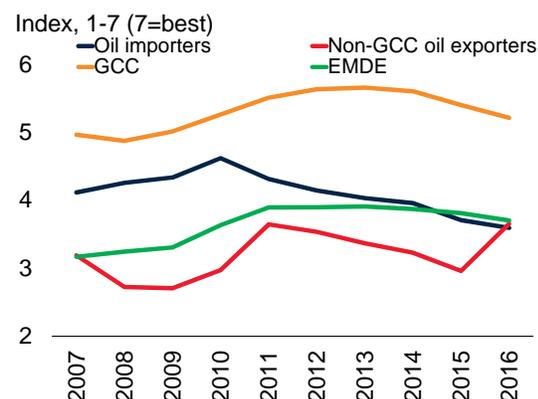
Figure 19. MNA: Infrastructure, health, and education indicators

Infrastructure investment needs are high, especially in electricity and transport. While the Middle East and North Africa performs well relative to other EMDEs on basic health measures, it is at or below the EMDE average in terms of education indicators, despite considerable long-term gains.

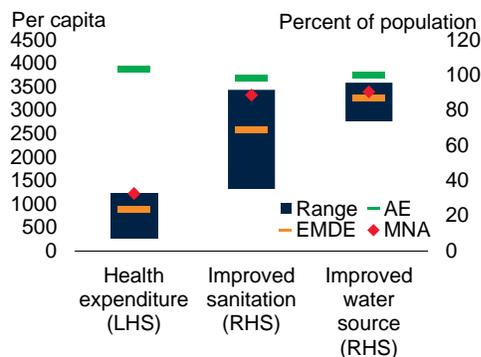
A. Infrastructure investment needs



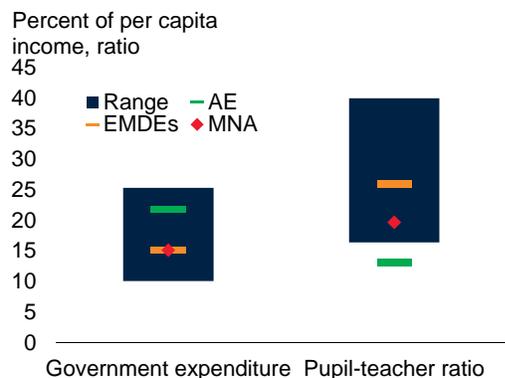
B. Quality of infrastructure



C. Selected health care indicators



D. Selected education indicators



Sources: Estache et al. (2013), World Economic Forum Global Competitiveness Index, World Bank.

A. Values are constant 2005 U.S. dollars and indicate annual investment needs for 2011-20. Oil importers include Djibouti, Egypt, Jordan, Lebanon, Morocco, and Tunisia. Non-GCC oil exporters include Algeria, the Islamic Republic of Iran, Iraq, Libya, Syria, and the Republic of Yemen. GCC countries include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

B. Unweighted averages of survey data. Data was collected using the question: “How would you assess general infrastructure (e.g., transport, telephony, energy) in your country? (1 = extremely underdeveloped—among the worst in the world; 7 = extensive and efficient—among the best in the world).” Oil importers include Egypt, Jordan, Lebanon, Morocco, and Tunisia. Non-GCC oil exporters include Algeria, the Islamic Republic of Iran, Libya, and the Republic of Yemen. GCC countries include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

C. Blue bars denote range of unweighted regional averages across EMDE regions. Health expenditure per capita in purchasing power parity terms, unweighted averages of 199 EMDEs, 34 AEs, and 17 MNA economies. Access to improved sanitation facilities (in percent of population), unweighted averages for 150 EMDEs, 33 AEs, and 19 MNA economies. Access to improved water sources (in percent of population), unweighted averages for 148 EMDEs, 34 AEs, and 18 MNA economies. Latest data available during 2011-15.

D. Blue bars denote range of unweighted regional averages across EMDE regions. Government expenditure per primary student (in percent of per capita income), unweighted averages of 87 EMDEs, 32 AEs, and 8 MNA economies. Pupil-teacher ratio in primary education (headcount basis), unweighted averages for 165 EMDEs, 31 AEs, and 14 MNA economies. Latest data available during 2011-15.

MNA scores well relative to other emerging and developing regions on basic health measures. However, the region is at or below the EMDE average in terms of education indicators, despite considerable long-term gains (World Bank 2011). MNA does not necessarily need to increase the level of investment in education, which has risen substantially over several decades, but rather to invest with the goal of increasing the quality of education, thereby supporting growth and lowering poverty (World Bank 2008).

V.3. Which policies can help address investment needs in the MNA region?

Several policy measures could support investment in MNA. Across the region, the scaling back of subsidies since 2014 has created space for increased public spending on investment in infrastructure, health, and education (IMF 2016b). High public sector wage expenditures could be reduced, with funds reallocated to investment. Improvements in governance and investor protection could also support private sector investment, as could incentives to undertake public-private partnerships (e.g., in Morocco; EBRD 2015a). In some oil importers, the electricity sector would benefit from additional privatization (Lebanon) or efforts to incentivize the private sector's contribution to electricity generation (Egypt). Finally, improved security conditions in the region are a prerequisite for a sustained pickup in investment.

VI. South Asia

South Asia (SAR) accounted for 4 percent of global investment, on average, over 2010-15. Despite an uptick in public investment spending, a deceleration in the private sector resulted in a substantial decline in overall investment growth, from 11 percent in 2011 to 3 percent in 2014. A rebound, to 6 percent in 2015, still left the growth rate below the long-term (1990-2008) average of 8 percent.

Recent investment weakness in South Asia reflects the legacy of weak output growth during 2010-13, excess manufacturing capacity in the face of sluggish external demand, and some uncertainty about government policy. These factors have compounded the long-term problems of structural bottlenecks, weak banking systems, and bouts of political tension. Needs for capital formation remain sizable, especially in the energy and transport sectors; the region also lags in the provision of health and education services. Governments can help directly, and by encouraging private sector participation. More broadly, improvements to the general business environment (e.g., through more streamlined regulations and reduced corruption) would enhance incentives for productive investment.

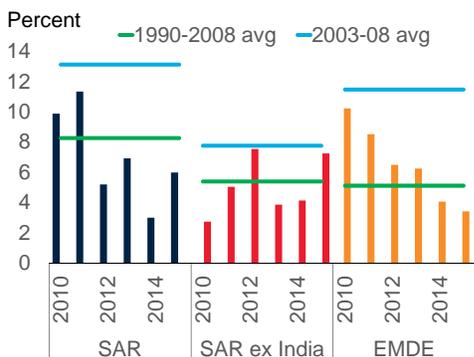
VI.1. How has investment growth in the SAR region evolved?

Weak investment has been a drag on South Asia's recent, consumption-driven expansion (World Bank 2016i). Investment growth slowed sharply from 11 percent in 2011 to 3 percent in 2014, with only a modest rebound to 6 percent in 2015—barely half of its 2011 pace and well below the long-term (1990-2008) average of 8 percent (Figure 20). The downward trend reflects a slackening in *India*, (which accounts for more than three-quarters of the region's total investment), which offset a pickup in *Bhutan*, *Nepal*, and *Pakistan*. Preliminary data suggests continued investment weakness in 2016.

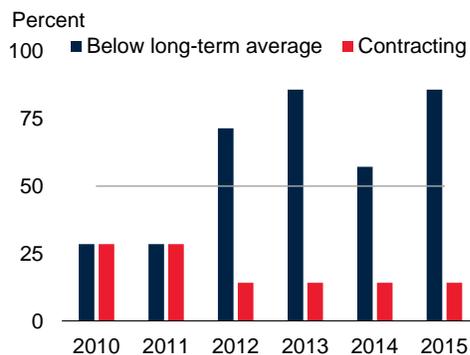
Figure 20. Investment growth slowdown in South Asia

Investment growth has been below the long-term average in more than half of SAR economies since 2012. Its composition has shifted away from private sector-driven investment growth during 2013-14 towards public sector-driven investment growth in 2015. While lower oil prices and easing political tensions supported investment, weak activity during 2010-12 and long-standing structural bottlenecks constrained investment.

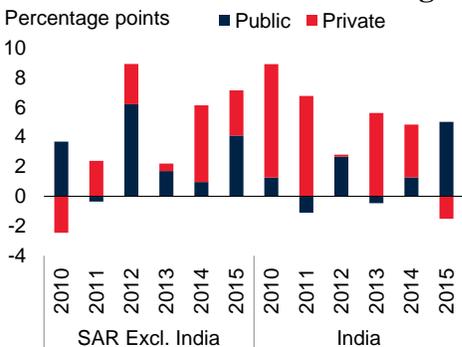
A. Investment growth



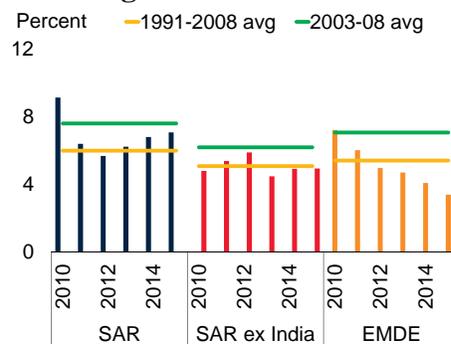
B. Share of SAR countries with weak investment growth



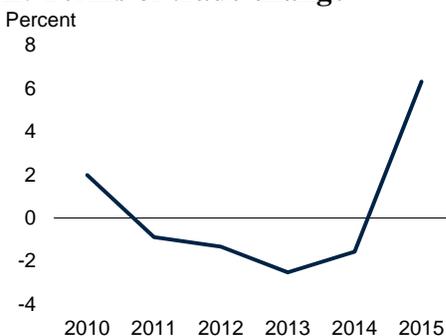
C. Contribution to investment growth



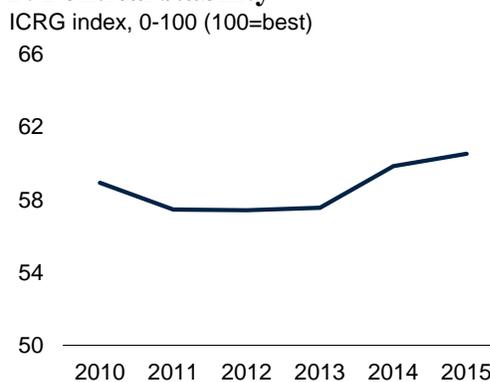
D. GDP growth



E. Terms of trade change



F. Political stability



Sources: Haver Analytics, PRS Group, Ministry of Finance of Sri Lanka, Reserve Bank of India, World Bank.

A. Weighted averages. Includes annual data for Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

B. Share of SAR economies with investment growth below its long-term average or with negative investment growth.

C. Weighted average for Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka.

D. GDP-weighted averages.

E. Investment-weighted averages. An increase denotes terms of trade improvements.

F. Investment-weighted average of ICRG index of Political Risk. An increase denotes greater political stability.

In *India*, gross fixed capital formation has been on a downward trend since 2011, with a shift in the composition from private to public. While public investment rose by 21 percent in FY2016, private investment (which accounts for two-thirds of the total) contracted by 1.4 percent, reducing overall investment growth to 4 percent. Infrastructure demand is expected to go up to \$1 trillion under the 12th Five-Year Plan (2012-17). Going forward, public and private investment should be supported by higher allocations in the FY2017 federal government budget to build and upgrade infrastructure, and the setup of a \$3 billion National Investment and Infrastructure Fund.

In *Pakistan*, investment surged in 2015, mainly reflecting the China-Pakistan Economic Partnership (CPEC) infrastructure project (worth \$45 billion). This has more than compensated for sluggishness in private investment. The project is part of *China's* “One Belt, One Road” initiative, and consists of a network of highways, railways, and pipelines to connect Western China to the Arabian Sea through the Gwadar Port in Pakistan. The *Islamic Republic of Iran* expressed interest in early 2016 to join the CPEC project. Combined with the ongoing gas pipeline project from the Islamic Republic of Iran, Pakistan should be able to maintain robust public investment growth in the near-term, while private investment is expected to pickup in the medium-term.

In *Bangladesh*, capital formation is estimated to remain weak in 2016, partly as a result of heightened political tensions and security concerns. *Sri Lanka's* investment contracted by 2 percent in 2016, following the suspension of the \$1.4 billion Colombo Port City real estate project for more than one year in 2015. In the near-term, investment growth in Sri Lanka is expected to continue on a downward trend, following the tightening of monetary policy in mid-2016 that raised financing costs. Fiscal consolidation, aimed at reducing the fiscal deficit to 3.5 percent of GDP by 2020 under the IMF's \$1.5 billion Extended Fund Facility program, will weigh on infrastructure spending (IMF 2016c).

During 2010-13, weak economic activity weighed on investment and business confidence. Since 2014, however, investor sentiment in the region has benefited from sharply lower oil prices, easing political tensions, and revived reform agendas in *India*, *Pakistan*, and *Sri Lanka*, as well as easing vulnerabilities in *Bangladesh*, *India*, and *Pakistan*. This uptick has yet to translate into a robust rebound in private investment. Structural bottlenecks (e.g., power shortages, poor road and rail networks) and administrative requirements constitute barriers to investment, and weak banking sectors constrain investment finance.

India's steep private investment slowdown has been attributed to several factors (World Bank 2016i; Tokuoka 2012). First, the need to unwind excess capacity built during the pre-financial crisis growth boom amid weak external demand (e.g., in the manufacturing sector) has discouraged new projects and caused investors to shelve existing projects. Second, policy uncertainty has been a factor. For example, the stalled Land Acquisition Bill has extended project development timelines. Lack of federal and state government coordination, on compensation for land acquisition and environmental clearances, has contributed to cost and time overruns. Third, lenders have been less willing to finance overleveraged corporates, especially in infrastructure-related sectors (e.g., power and other utilities, steel, and cement firms). In particular, the Reserve Bank of India's 2015 corporate governance reforms in state-owned banks (which represent two-thirds of the total banking sector lending) has adversely affected lending to leveraged corporates and conglomerates.

VI.2. What are the remaining investment needs in the SAR region?

South Asia is the second most densely populated region in the world, behind East Asia and Pacific, with large and pressing investment needs for infrastructure improvement (Bloom and Rosenberg 2011; Figure 21). Metrics of human capital provision (e.g., expenditure on education and healthcare, teacher-pupil ratios, doctor-patient ratios, availability of improved water and sanitation in rural areas), are below the EMDEs average (World Bank 2016j). This suggests that sizable additional outlays on human capital could effectively alleviate poverty (Romer 2016; Estache and Garsous 2012). Rapid urbanization and the maintenance of growth momentum, call for improvement of energy and transport infrastructure (Ellis and Roberts 2016; Inderst 2016; Battacharya 2012; ADB 2009, 2012; Andres, Biller, and Dappe 2014).

South Asia is one of the least economically integrated regions in the world (World Bank 2016a). This has been attributed to inadequacies in transport and power infrastructure (ADB 2009). Coverage differs within countries and across the region, with *India* and *Pakistan* somewhat better positioned than other countries.

Energy shortages (electricity, diesel) remain a critical constraint to activity in the region. Underdeveloped within-country and cross-border electricity grid network connectivity and, in some cases, geopolitical tensions have contributed to significant energy shortfalls, compounding regular electricity outages. In *India*, dependence on imported fuels for power generation, and low electricity tariffs have hampered power generation capacity, which now requires significant expansion to meet energy shortfalls (McKinsey 2011).

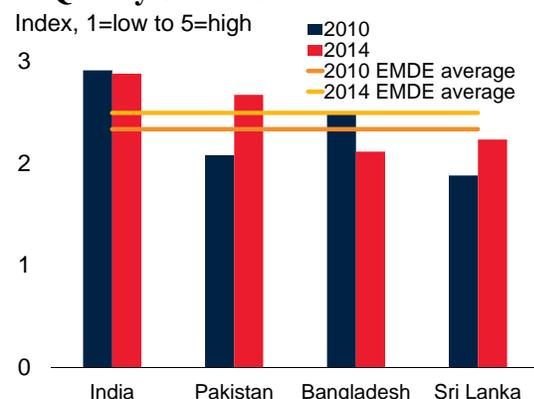
Bangladesh's infrastructure quality lags behind other countries in the region: power shortages and poor transport infrastructure have affected investment and productivity (World Bank 2015r). The 7th Five Year Plan estimates that about \$410 billion in financing—twice the size of 2015 GDP—is needed for developing Bangladesh's infrastructure. Investment is also needed in public health care, where expenditure has declined from 1.1 percent of GDP in 2010 to 0.7 percent of GDP in 2014 (World Bank 2015e, 2016h).

In *Sri Lanka*, fiscal consolidation, coupled with priority spending to rebuild infrastructure after a 25-year civil war, has crowded out expenditure for human capital-building purposes. Government spending on education fell from 2.7 to 1.8 percent of GDP during 2006-13, while spending on health declined from 2.0 to 1.4 percent of GDP over the same period (World Bank 2016k).

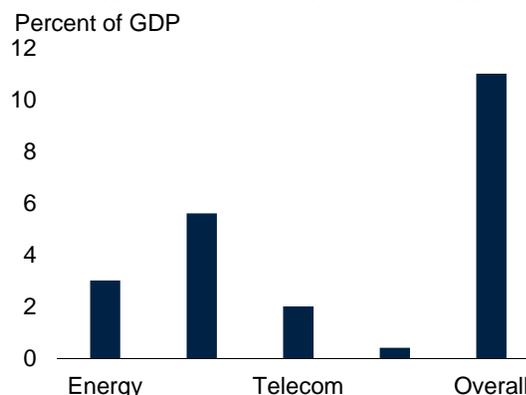
Figure 21. Investment needs in South Asia

Despite improvements since 2010, sizable investment needs remain in public infrastructure (energy, transport) and human capital development.

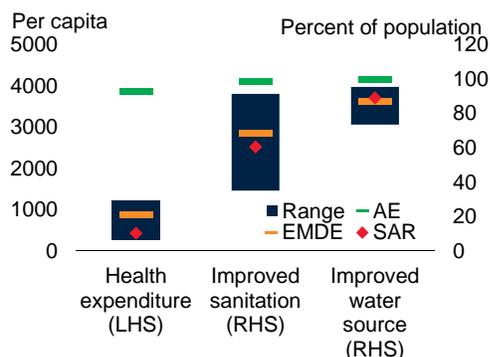
A. Quality of infrastructure



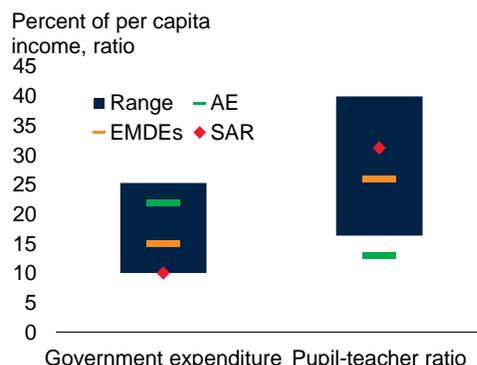
B. Infrastructure investment needs



C. Selected health indicators



D. Selected education indicators



Sources: Bhattacharya (2012), Haver Analytics, Inderst (2016), World Bank.

B. This represents investment as a share of GDP required every year during 2010-12 to meet investment needs. The authors use “bottom-up” approach based on identified pipeline regional infrastructure projects across SAR.

C. Latest data available during 2011-15. Blue bars denote range of unweighted regional averages across EMDE regions. Health expenditure per capita in purchasing power parity terms, unweighted averages of 199 EMDEs, 34 AEs, and 6 SAR economies. Access to improved sanitation facilities (in percent of population), unweighted averages for 150 EMDEs, 33 AEs, and 8 SAR economies. Access to improved water sources (in percent of population), unweighted averages for 148 EMDEs, 34 AEs, and 8 SAR economies.

D. Latest data available during 2011-15. Blue bars denote range of unweighted regional averages across EMDE regions. Government expenditure per primary student (in percent of per capita income), unweighted averages of 87 EMDEs, 32 AEs, and 5 SAR economies. Pupil-teacher ratio in primary education (headcount basis), unweighted averages for 165 EMDEs, 31 AEs, and 8 SAR economies.

VI.3. Which policies can help address infrastructure needs in the SAR region?

The alleviation of some longstanding obstacles to growth would help increase the level and productivity of investment of all forms. A more targeted, multi-pronged, policy strategy could also encourage investment by increasing returns to investment, and by expanding the financing envelope (Henckel and Mckibbin, 2010; Nataraj 2007).

Private investment. Under the right conditions, public investment can crowd-in private investment (World Bank 2016i).⁹ For example, private firms may be able to reap the benefits of scale, if public infrastructure facilitates market access (Calderón, Moral-Benito, and Servén 2010). However, in South Asia, only *India* appears to have experienced a positive crowding-in effect (Jesintha and Sathanapriya 2011; World Bank 2006).

Financing. Financing for public and private investment can be expanded in a number of ways to narrow the investment financing gap (Andres, Biller, and Dappe 2014; McKinsey 2013; ADB 2012, 2009). *First*, public-private partnership may offer efficiency gains and cost-effectiveness (e.g., infrastructure funds), and at the same time alleviate fiscal pressures (Anadon and Surana 2015; Nataraj 2007). This can help reallocate government spending to socially desirable projects that cannot, in practice, be undertaken by the private sector, for instance, because of an unduly low private rate of return (e.g., water supply and sanitation projects). *Second*, domestic savings can be mobilized by improving access to the financial system (e.g., encouraging pension funds) and by broadening and raising government revenue collection. *Third*, banks' lending capacities can be increased by strengthening their balance sheets, and the efficiency of capital allocation may be improved by increasing the commercial orientation of banks, including through privatization and governance reforms. *Fourth*, greater commercial orientation (through privatizations or concessions to private investors) of state-owned enterprises could raise efficiency and increase investment. *Fifth*, reducing asset-liability mismatches through greater use of funding through capital markets (e.g., infrastructure bonds), can be an alternative to heavy reliance on bank lending for infrastructure-related projects. *Finally*, FDI in infrastructure can be encouraged by removing regulatory obstacles to doing business in restricted sectors (Kirkpatrick, Parker, and Zhang 2006; World Bank 2000).

Reforms to foster an enabling environment. South Asia is just ahead of Sub-Saharan Africa, but behind the other regions in terms of a conducive business climate (World Bank 2016f; Lopez-Acevedo, Medvedev, and Palmade 2016). Entry and administrative barriers in many sectors (construction, finance, retail and wholesale, telecommunication, and health care) in *Bangladesh*, *India*, and *Pakistan* have hampered investment in these sectors. The burden of regulatory compliance, delays in utility connections, difficulties in obtaining permits to start and operate business, high taxes, and rigid labor markets raise the cost of doing business and discourage investment (Pachouri and Sharma 2016; Shirke and Srija 2014). Compared to an average of 103 days in EMDE, obtaining services from utilities (e.g., electricity) can take four times as long in *Bangladesh* and almost twice as long in *Pakistan* (World Bank 2016f). In *India*, investors point to restrictive labor laws as contributing to lower productivity in the manufacturing sector, restricting employment opportunities for women, and discouraging the adoption of new technologies.

Reforms that promote competitiveness and reduce barriers to trade can encourage investment in the tradable export-oriented sectors (e.g., services and manufacturing). This can also level the playing field and increase profitability of exporting, or of competing with imports in hitherto protected industries (Alfaro and Chari 2014). More generally, reforms to reduce regulatory

⁹ Public investment could also lead to crowding-out of private investment, e.g. Pakistan (World Bank 2016g).

burdens (e.g., land acquisition, environmental impact assessment) and to strengthen public-private partnerships legislation (e.g., consistent regulations, transparent bidding procedures) can foster investment. Strengthening public investment management processes, integrating infrastructure projects in budget cycles, and curbing corruption in infrastructure projects will not only improve quality of the infrastructure, but also improve the efficiency of government spending (KPMG 2011; Ali 2009).

Stability. Policy and political uncertainty represents a deterrent to investment in parts of the region. Security challenges (Afghanistan, Pakistan) and geopolitical tensions (India, Pakistan) remain a formidable obstacle to creating a more conducive investment climate (Dash, Nafaraj, and Sahoo 2014) especially for cross-border projects that could increase regional economic integration. Stalled reforms on land (acquisition, compensation, and environmental clearances) remain a drawback on infrastructure-related private investment. Reforms to enhance efficiency of labor market—encouraging greater female labor market participation, facilitating hiring and redundancy procedures, and reducing taxes on low-paid workers—would increase the mobility and flexibility of the work force (Shirke and Srija 2014). In turn, the resulting increase in profitability, as well as the improvement in household incomes, would provide incentives for the expansion of businesses, including small and medium-size enterprises.

VII. Sub-Saharan Africa

Sub-Saharan Africa (SSA) accounted for a modest 2 percent of global investment, on average, during 2010-15. However, it suffered the sharpest investment growth slowdown among EMDE regions despite large-scale public investment efforts until recently. Investment growth slowed from nearly 8 percent in 2010 to 0.3 percent in 2015, on average—well below the long-term (1990-2008) average of about 6 percent.

The investment growth slowdown in Sub-Saharan Africa is concentrated in South Africa and oil exporters. It reflected domestic political tensions, a sharp terms of trade deterioration and, in some economies, domestic policy tightening. Investment needs remain sizable in agriculture, infrastructure, and health and education.

VII.1. How has investment in the SSA region evolved?

For Sub-Saharan Africa as a whole, investment growth averaged about 5 percent in 2010-15, less than half the average annual growth of 12 percent recorded prior the global financial crisis, despite rapid public investment growth until 2014. In more than two-thirds of SSA countries, investment growth was below its long-term average in 2015 and, in more than one-third, it was negative (Figure 22).

Investment growth was particularly weak in South Africa and a number of oil exporters, but was robust among metals exporters. Investment growth averaged just 2.5 percent per year in South Africa in 2010-15, compared with over 9 percent in 2000-08, reflecting deep structural constraints, including inefficiencies in state-owned enterprises.

Among oil exporters, investment growth slowed significantly in Angola, Chad, and Nigeria; and was negative in Equatorial Guinea. The sharp decline in oil prices was compounded by the introduction of foreign exchange controls or weak business environments that weighed on investors' sentiment. However, in Cameroon and Gabon, large infrastructure programs continued to raise investment growth, despite a decline in investment in the oil industry.

Investment growth in metals-exporting countries averaged 11.3 percent per year over the period 2010-15 (compared with 8.5 percent in 2000-08), with double-digit growth rates in Ghana, Mozambique, and Namibia. Investment growth in Ghana benefited from a more stable economic environment, while Mozambique's and Namibia's extractive industries continued to attract foreign investment. Some metals exporters were subject to domestic shocks that held back investment, including power shortages (Botswana, Zambia), deteriorating security conditions (Niger), the Ebola virus (Liberia, Sierra Leone), and political uncertainty (the Democratic Republic of Congo, Zambia).

Investment growth has been solid in agricultural exporters, such as Côte d'Ivoire, Ethiopia, and Senegal, supported by the implementation of infrastructure development projects. However, investment growth stagnated in commodity importers such as Cabo Verde and Mauritius, reflecting a slowdown in their main trading partners. It was highly volatile in a number of fragile or conflict affected countries.

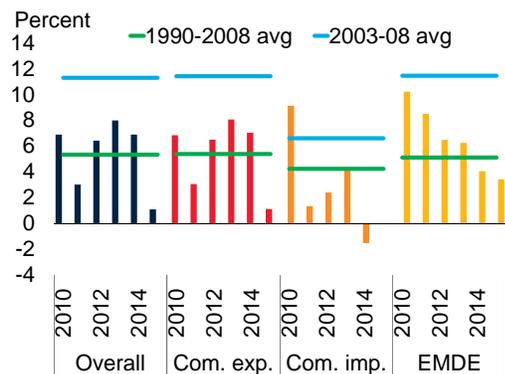
External shocks, including the end of the commodity super cycle, a marked slowdown in major trading partners, and rising domestic vulnerabilities contributed to the investment growth slowdown in the region. Prior to the global financial crisis, higher commodity prices, low global risk aversion and favorable domestic growth prospects prompted significant capital inflows in the region. Average net FDI inflows grew from 0.5 percent of GDP in 1974-94 to 2.2 percent of GDP in 1995-2008 (Calderon and Boreux 2016). By contrast, over the period 2010-15, during which commodity prices declined sharply, net FDI flows averaged 1.9 percent of GDP.

This period of investment growth slowdown in the region coincided with a weak growth recovery in the European Union, the slowdown of economic activity in China as it embarked on the rebalancing of its economy toward more domestic consumption, and the appreciation of the U.S. dollar. The European Union, the United States, and China are the region's main sources of foreign investment. This triple blow of weak growth in major export markets, lower commodity prices and a higher U.S. dollar hit the region's oil exporters particularly hard. During 2010-15, net FDI flows averaged just 0.4 percent of GDP in oil exporters, down from 2.5 percent of GDP in 2004-08. Net FDI flows were negative in Angola and Equatorial Guinea. In contrast, in oil importers, net FDI flows rose, averaging over 3 percent of GDP, as investors responded to growth opportunities in construction, light manufacturing and renewable energy.

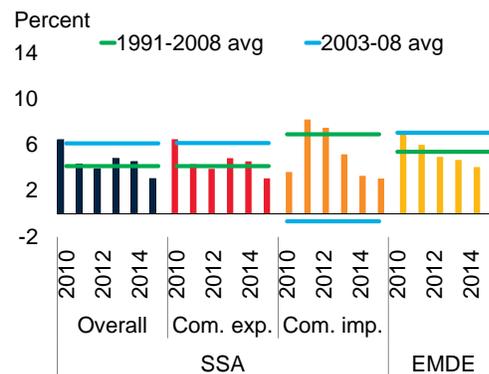
Figure 22. SSA: Investment growth slowdown

Investment growth has slowed sharply from about 8 percent in 2010 to near-zero in 2015, despite significant public investment until 2014. The slowdown has reflected a severe terms-of-trade deterioration in commodity exporters as well as long-standing structural bottlenecks and political tensions.

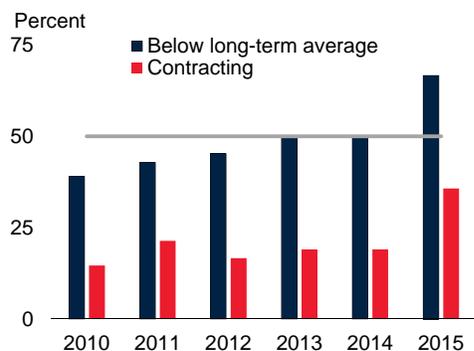
A. Investment growth



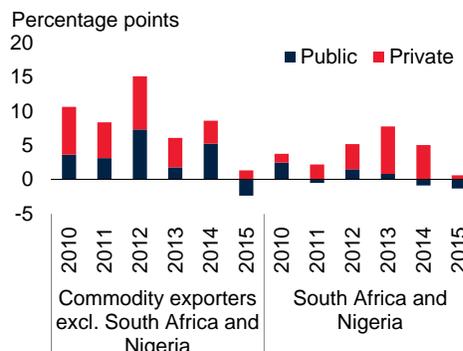
B. Output growth



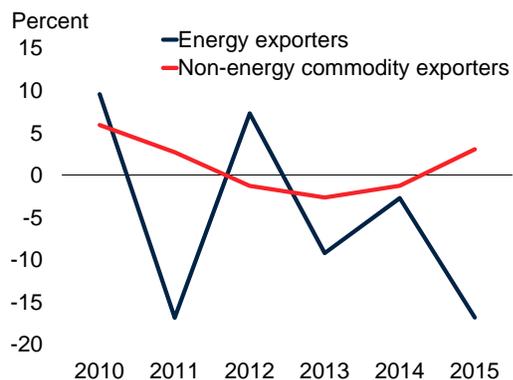
C. Share of SSA EMDEs with weak investment growth



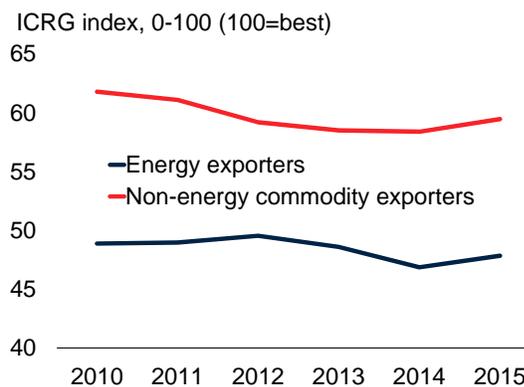
D. Contributions to investment growth



E. Terms of trade change



F. Political stability



Sources: Haver Analytics; Oxford Economics; World Economic Outlook, International Monetary Fund; World Bank Development Indicators; PRS Group; World Bank.

A. Weighted averages.

C. Long-term averages are country-specific and refer to available data over 1990-2008.

E. F. Investment-weighted averages.

In addition to the unfavorable external environment, the slowdown in investment growth reflected weak macroeconomic fundamentals and policies, and an uncertain institutional and legal framework in some countries. Fiscal and current account balances have deteriorated across the region since 2010 (World Bank 2015s). In 2014, 33 countries registered fiscal deficits greater than 5 percent of GDP (up from 25 in 2007), while 15 countries had a current account deficit exceeding 5 percent of GDP (up from only five in 2007) (Calderon and Boreux 2016). This meant that, in some countries, policy makers lacked the ability to conduct countercyclical policies to support economic activity, while rising vulnerabilities weighed on capital inflows. Large current account deficits and falling capital inflows put pressures on real exchange rates. Rising inflation, reflecting deep currency depreciations, prompted central banks in a number of commodity exporters to tighten policy, making it costly for firms to invest.

In many countries, basic reforms to improve the business environment—including the rule of law—have been negligible, especially among resource-rich countries. Uncertainty about the enforcement of contracts, property rights and the direction of policy was compounded by weak investment planning and execution capacity. These factors played a significant role in slowing investment growth across the region.

VII.2. What are Sub-Saharan Africa’s remaining investment needs?

Sub-Saharan Africa’s strategic priorities to reinvigorate growth and reduce poverty call for investments in agriculture, infrastructure, and health and education (World Bank 2016l).

In *agriculture*, which provides the livelihood for almost two-thirds of Sub-Saharan Africa’s population, investments are needed to raise farm productivity. Increasing investments in agricultural R&D is not only essential for boosting growth in the region but also for accelerating its transformation. Infrastructure investments are needed to support agricultural productivity growth and potential export diversification. These include investments to build or improve irrigation, road, and storage infrastructure, and to develop higher value chains and markets.

Although some countries in the region have made progress in improving their *infrastructure*, results vary. Improved infrastructure was partly responsible for the region’s recent strong growth performance (Calderon and Serven 2008). That contribution reflected mostly advances in information communication technology (ICT). The region has experienced an unprecedented increase in mobile phone subscriptions. By contrast, progress in the power sector has been far more limited. Only a third of households have access to electricity (World Bank 2016l).

- The deterioration in the quantity and quality of *power infrastructure* has increased the need for investment in renewable energies. These have the potential to improve access to electricity while addressing climate change challenges.
- *Transport infrastructure* development has also been limited. In many countries, only a small proportion of the road network is paved. Railways development is inadequate.
- Across the region, investments are needed to improve the quality of *education and skills*, the health status of the populations, and the coverage of infrastructure services, notably

access to improved sanitation. Despite recent progress, Sub-Saharan Africa lags other regions (Figure 23).

The region's infrastructure investment needs are large, estimated at 15 percent of GDP, reflecting insufficient and inefficient spending on capital, operation, and maintenance expenditures (Foster and Briceno-Garmendia 2010). Financing to address these investment needs has increased. The external sources of financing for infrastructure have expanded. Official development finance—led by the World Bank and the African Development Bank—has increased appreciably and is supporting transport and water and sanitation investments in a number of countries. China emerged as a major bilateral source of infrastructure finance. Chinese investments have increasingly targeted the energy sector and hydropower in particular. Direct private sector participation in infrastructure investment has surged. Private participation in infrastructure now accounts for more than half of total external finance, with a large share of the investments going to the telecom, energy and transport sectors (Gutman, Sy, and Chattopadhyay 2015).

VII.3. Which policies can help address the SSA region's remaining infrastructure investment needs?

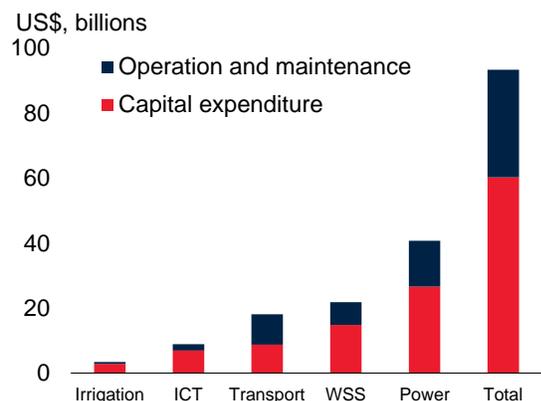
Financing for infrastructure in Sub-Saharan Africa from multilateral development banks, China, and the private sector tripled between 2004 and 2012 (Gutman, Sy, and Chattopadhyay 2015). External financing for infrastructure grew fastest in the energy sector, with Ethiopia, Ghana, Kenya, Nigeria, and South Africa among the largest recipients. Untapped opportunities remain, including in renewable energy (EBRD 2016) as well as in other investments that can support private sector development. Innovative financing solutions for infrastructure investment that mitigate risk factors for investors have been developed. Tools such as blended finance, co-financing between private investors and development finance institutions, public-private partnerships and climate finance instruments are being deployed in countries across the region (IFC 2016). Nevertheless, financing investment projects remain challenging. Although private investment has become significant and covers a broad range of countries, it has focused more on ICT than other sectors.

Despite the rising importance of external finance, public sector budgets remain the primary source of funding for infrastructure investments in the region. Countries across the region finance about 65 percent of their infrastructure expenditures with domestic resources (IMF 2014c). In some countries, the fiscal space created by debt relief for heavily indebted poor countries facilitated these expenditures. Others took advantage of low interest rates to issue eurobonds to finance infrastructure investments. Governments spend most of their resources on transport and energy. Nonetheless, the level of public finance remains insufficient to cover their infrastructure needs. Sub-Saharan African countries need to mobilize more domestic resources to finance infrastructure investment. Tax-to-GDP ratios are far below the EMDE average in a number of countries, reflecting a failure to reform weak tax systems, especially in oil exporters.

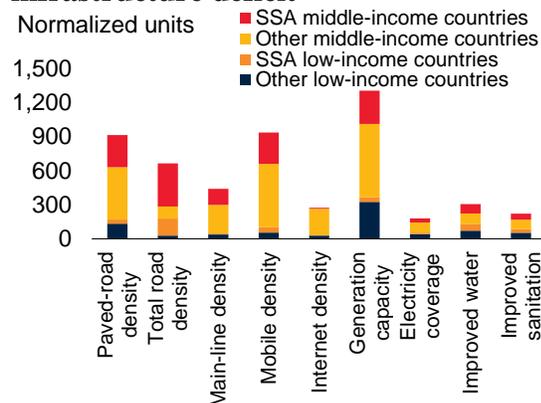
Figure 23. SSA: Investment needs

Sub-Saharan Africa's investment needs are high across a wide range of sectors. There has been progress in improving infrastructure in the region, but progress has been slow, especially in energy and transport.

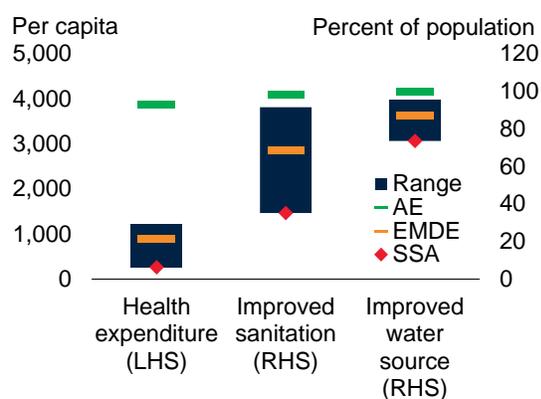
A. Total infrastructure spending needs



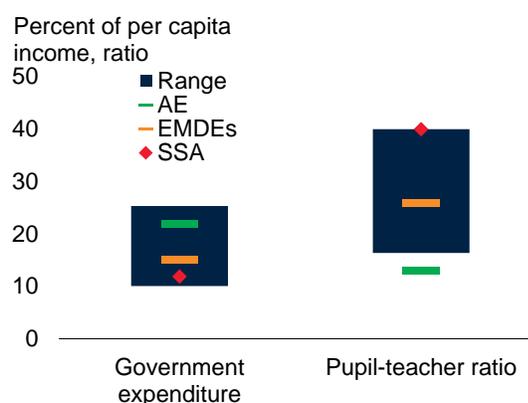
B. International perspective on Africa's infrastructure deficit



C. Selected health care indicators



D. Selected education indicators



Source: Haver Analytics; Pierce, and Foster 2008; Regional Economic Outlook, International Monetary Fund; World Bank; Yepes (2008).

A. ICT=information and communication technology; WSS=water supply and sanitation. Estimates by Foster and Briceno-Garmendia (2010).

B. Road density is measured in kilometers per 100 square kilometers of arable land; telephone density in lines per thousand population; generation capacity in megawatts per million population; electricity, water, and sanitation coverage in percentage of population.

C. Blue bars denote range of unweighted regional averages across EMDE regions. Health expenditure per capita in purchasing power parity terms, unweighted averages of 199 EMDEs, 34 AEs, and 47 SSA economies. Access to improved sanitation facilities (in percent of population), unweighted averages for 150 EMDEs, 33 AEs, and 47 SSA economies. Access to improved water sources (in percent of population), unweighted averages for 148 EMDEs, 34 AEs, and 47 SSA economies. AE are advanced economies. Latest data available during 2011-15.

D. Blue bars denote range of unweighted regional averages across EMDE regions. Government expenditure per primary student (in percent of per capita income), unweighted averages of 87 EMDEs, 32 AEs, and 29 SSA economies. Pupil-teacher ratio in primary education (headcount basis), unweighted averages for 165 EMDEs, 31 AEs, and 44 SSA economies. Latest data available during 2011-15.

The capacity of countries in the region to effectively use resources for infrastructure investment remains a critical issue. The efficiency of public investment in Sub-Saharan Africa lags behind other EMDEs, reflecting poor project selection, weak enforcement of procurement procedures, and failure to complete projects (Dabla-Norris et al. 2012). These weaknesses point to a need to increase absorptive capacity in public infrastructure in the region.

Sub-Saharan Africa's infrastructure development faces major geographic and physical challenges, reflecting its low population density, low urbanization, and large number of landlocked countries. A sizable number of small countries makes it difficult for firms to exploit economies of scale. As a result, Sub-Saharan Africa's infrastructure services are more expensive than in other regions, suggesting that greater gains could be achieved through deeper forms of regional integration.

Four key areas of policy priorities to address investment needs and ensure sustainable financing are the following:

- *Sustaining public investments.* Domestic resources— tax and nontax revenue—are likely to remain the dominant source of financing for infrastructure. Increasing domestic revenue may provide the most sustainable way of financing infrastructure investment. This will require improving tax collection as well as cost recovery. In many countries, debt levels are still manageable, and borrowing to increase spending on infrastructure remains a viable option. However, debt sustainability should not be compromised.
- *Encouraging greater private sector participation in infrastructure.* Countries need to strengthen the pipeline of bankable projects that can meet the financial objectives of private investors. Innovative fund and deal structures, such as guarantees and risk sharing, should be developed. Blended finance instruments that can leverage private sector development financing should be promoted. Public-private partnerships (PPPs) are a tested strategy that can be applied to numerous sectors (IFC 2016). However, governments have to establish autonomous regulatory agencies to oversee the private agents. The terms of the partnerships have to be monitored carefully to ensure PPPs deliver a normal return and not a monopoly profit.
- *Strengthening public investment management systems.* An effective public financial management capacity is critical in scaling up infrastructure investment spending. Countries should seek to strengthen capacity for project selection and appraisal, and enhance monitoring of project execution to minimize leakages. Operation and maintenance expenditures for existing infrastructure should be fully integrated in a medium-term expenditure framework to ensure that they receive adequate budgetary resources.
- *Promoting regional integration of infrastructure.* A regional approach to the provision of infrastructure services is needed to overcome the region's geographic and physical challenges. This will require effective regional institutions, setting priorities for regional investments, harmonizing regulatory frameworks and administrative procedures, and facilitating cross-border infrastructure (Kessides and Benjamin 2012).

VIII. Conclusion

This paper documents regional perspectives on the recent slowdown in investment growth in EMDEs. It finds that the deceleration in investment growth since 2010 has been more pronounced among BRICS and in EMDE regions with a large number of commodity exporters. It also finds that infrastructure investment needs are sizable across EMDE regions, reflecting the challenges to support expanding economic activity, accommodate rapid urbanization, and achieve sustainable development goals. While public investment efforts have improved infrastructure stock and quality, the infrastructure deficit remains significant, particularly in the energy and transport sectors. Across EMDE regions, governments need to expand, upgrade and maintain roads, power generation, water and sanitation systems, telecommunications infrastructure and education and health care institutions.

Public investment can help address the investment weakness in EMDE regions. Public investment directly boosts overall investment in the economy, and can foster private investment. Some countries, such as the GCC countries, have the ability to ramp up public investment thanks to their high incomes. However, many other EMDEs, including those in Europe and Central Asia and Sub-Saharan Africa, have little fiscal space to increase public investment because of their high debt-to-GDP ratios and the need for fiscal consolidation. External financing conditions have tightened, with increased uncertainty in the United States and Europe, which makes tapping debt markets increasingly difficult and risky. At the same time, in many regions, low tax revenues, weak banking systems and underdeveloped capital markets limit the share of domestic resources that can be allocated to public investment. In low-income countries, regulatory and implementation capacity constraints are key obstacles to scaling-up public investment in infrastructure. Against this backdrop, a number of policy measures could allow EMDEs to boost investment.

Improve the efficiency of public investment. A key priority for EMDEs should be to increase the efficiency of public investment. Increasing public investment efficiency is particularly crucial for lower-middle and low-income economies given their limited resources. The efficiency of public investment in EMDEs in Sub-Saharan Africa and South Asia consistently lags behind other EMDEs. This reflects weaknesses in their public investment management, including poor project selection, weak enforcement of procurement procedures, and failure to complete projects. Medium-term budget frameworks can improve spending predictability; greater transparency of expenditures and independent spending evaluations can improve incentives to tighten efficiency; and better coordination between various levels of government can reduce duplication and inconsistencies. Improvements in public investment efficiency could also involve strong rules to protect capital expenditures during periods of fiscal consolidation, and strengthening capacity in project selection and appraisal, and monitoring of project execution.

Create more fiscal space through domestic resource mobilization and changes in the composition of expenditures. Additional domestic tax revenues could help create space for public investment in priority spending areas such as infrastructure. Domestic resources could be mobilized through

increased revenue collection, by enhancing tax administration, broadening the tax base, or raising tax rates. Revenue-to-GDP ratios are particularly low in South Asia and Sub-Saharan Africa. Efforts to remove exemptions, tighten tax administration, and broaden tax bases could help generate budgetary resources to finance public investment projects. Spending on public investments could also be boosted by reallocating expenditures toward growth-enhancing investment from expenditures that are less clearly aligned with policy priorities. Such expenditures could be identified in periodic public expenditure reviews that assess all government expenditures against policy priorities.

Facilitate private investment. Empirical studies show that an increase in public investment would raise private investment, but this crowding-in effect may be temporary (World Bank 2017a). A favorable business environment, including stable macroeconomic conditions and predictable policies and regulations, may not be sufficient to attract private investment. Countries may need to develop appropriate innovative fund and deal structures, such as guarantees and risk sharing, and promote blended finance instruments that can leverage private sector development financing. Public-private partnerships are a tested strategy that can be applied to numerous sectors. However, governments must establish autonomous regulatory agencies to oversee the private agents. Multilateral development institutions can help EMDEs address these issues.

References

- ADB (Asia Development Bank). 2009. *Infrastructure for a Seamless Asia*. Manila, the Philippines: Asia Development Bank.
- . 2012. *Infrastructure for Supporting Inclusive Growth and Poverty Reduction in Asia*. Manila, Philippines: Asia Development Bank.
- . 2016. “Central Asian Countries Identify \$94 Billion Energy Investment Needs to 2023.” News Release October 24. Asian Development Bank, Manila.
- Alfaro, L., and A. Chari. 2014. “Deregulation, Misallocation, and Size: Evidence from India.” *Journal of Law and Economics* 57 (4): 897-936.
- Ali, A., 2009. “Effects of Corruption on FDI Inflows.” *Cato Journal* 29 (2), Spring/Summer.
- Anadon, D. L., and K. Surana. 2015. “Public Policy and Financial Resource Mobilization for Wind Energy in Developing Countries: A Comparison of Approaches and Outcomes in China and India.” *Global Environmental Change* 35: 340–359.
- Anand, R., and V. Volodymyr. 2014. “Disentangling India’s Investment Slowdown.” IMF Working Paper 14/47, International Monetary Fund, Washington, DC.
- Anbumozhi, V., and P. S. Intal. 2015. “Can Thinking Green and Sustainability Be an Economic Opportunity for ASEAN?” Economic Research Institute for ASEAN and East Asia (ERIA), Jakarta.
- Andres, L., D. Biller, and M. H. Dappe. 2014. “Infrastructure Gap in South Asia.” Policy Research Working Paper Series 7032, World Bank, Washington, DC.
- Bhattacharya, A., J. Meltzer, J. Oppenheim, Z. Qureshi, and N. Stern. 2016. “Delivering on Sustainable Infrastructure for Better Development and Better Climate.” Global Economy and Development, The Brookings Institution, Washington, DC.
- Bhattacharya, A., M. Romani, and N. Stern. 2012. “Infrastructure for Development: Meeting the Challenge.” Centre for Climate Change Economics and Policy, London.
- Bhattacharyay, B. N. 2012, “Estimating Demand for Infrastructure 2010-2020,” In *Infrastructure for Asian Connectivity*, edited by B. N. Bhattacharyay, M. Kawai, and R. Nag. Asian Development Bank Institute and Asian Development Bank. Cheltenham, U.K., and Northampton MA: Edward Elgar.
- Bloom, D. E., and L. Rosenberg. 2011. “The Future of South Asia: Population Dynamics, Economic Prospects and Regional Coherence.” Program on the Global Demography of Aging Working Paper Series 68, Harvard T.H.Chan School of Public Health, Cambridge, MA.
- BMI Research. 2016. “Asia Infrastructure Report.” BMI Research, London.
- Calderon C., and S. Boreux. 2016. “*Citius, Altius, Fortius*: Is Growth in Sub-Saharan Africa More Resilient?” *Journal of African Economies* 24 (4): 502-528.
- Calderón, C., and L. Servén. 2003. “The Output Cost of Latin America’s Infrastructure Gap.” In: *The Limits of Stabilization: Infrastructure, Public Deficits and Growth in Latin America*. Stanford, edited by W. Easterly and L. Servén. Redwood City, CA: Stanford University Press.
- Calderon, C., E. Moral-Benito, and L. Servén. 2011. “Is Infrastructure Capital Productive? A Dynamic Heterogeneous Approach.” Policy Research Working Paper 5682, World Bank, Washington, DC.
- Dabla-Norris, E., J. Brumby, A. Kyobe, Z. Mills, and C. Papageorgiou. 2012. “Investing in Public

- Investment: An Index of Public Investment Efficiency.” *Journal of Economic Growth* 17 (3): 235–66.
- Dash, P. K., G. Nafaraj and P. Sahoo. 2014. *Foreign Direct Investment in South Asia: Policy, Impact, Determinants and Challenges*. New Delhi: Springer.
- Dethier, J., and A. Moore. 2012. Infrastructure in Developing Countries: An Overview of Some Economic Issues. Zentrum für Entwicklungsforschung/Center for Development Research. ZEF-Discussion Papers on Development Policy No. 165, University of Bonn.
- EBRD. 2015a. *EBRD Transition Report 2015-16*. London: European Bank for Reconstruction and Development.
- . 2015b. *Strategy for Turkey*. London: European Bank for Reconstruction and Development.
- European Investment Bank. 2016. “Responding to Africa’s Energy Needs.” European Investment Bank, Luxembourg.
- Ellis, P., and M. Roberts. 2016. *Leveraging Urbanization in South Asia: Managing Spatial Transformation for Prosperity and Livability*. Washington, DC: World Bank.
- Engel, E., R. Fischer, and A. Galetovic. 2011. “Public-Private Partnerships to Revamp U.S. Infrastructure.” The Brookings Institution, Washington, DC.
- ESCAP. 2015. *Economic and Social Survey of Asia and the Pacific 2015*. Bangkok: United Nations Economic and Social Commission for Asia and the Pacific.
- Estache, A., and G. Garsous. 2012. “The Impact of Infrastructure on Growth in Developing Countries.” *IFC Economics Notes Note 1*, World Bank, Washington, DC.
- Estache, A., E. Ianchovichina, R. Bacon, and I. Salamon. 2013. *Infrastructure and Employment Creation in the Middle East and North Africa*. Washington, DC: World Bank.
- Fay, M., and T. Yepes. 2003. “Investing in Infrastructure: What Is Needed from 2000 to 2010?” Policy Research Working Paper 3102. Washington, DC: World Bank.
- Fay, M., Toman, M., Benitez, D., and Csordas, S. 2011. “Infrastructure and Sustainable Development.” In *Post-Crisis Growth and Development*, edited by Fardoust, S., K. Yongbeom, and C. Sepúlveda. Washington, DC: World Bank.
- Foster, V. and C. Briceno-Garmendia. 2010. “Africa’s Infrastructure: A Time for Transformation.” World Bank, Washington, DC.
- Global Infrastructure Facility. 2015. Results Framework: As Adopted by the GIF Governing Council. World Bank, Washington, DC.
- Gobat, J., and K. Kostial. 2016. “Syria’s Conflict Economy.” IMF Working Paper 16/123, International Monetary Fund, Washington, DC.
- Gramlich, E. 1994 “Infrastructure Investment: A Review Essay.” *Journal of Economic Literature*, 32(3): 1176-96.
- Gutman J., A. Sy, and S. Chattopadhyay. 2015. “Financing African Infrastructure: Can the World Deliver?” The Brookings Institution, Washington, DC.
- Hansakul, S and H. Levinger. 2016 “Asia Infrastructure Financing: Getting It Right Would Lift Medium-Term Growth.” Deutsche Bank Research. Deutsche Bank, Frankfurt.
- Hencekl, T., and W. McKibbin. 2010. “The Economics of Infrastructure in a Globalized World: Issues, Lessons and Future Challenges.” The Brookings Institution, Washington, DC.

- IADB (Inter-American Development Bank). 2010. “Urbanization in Latin America and the Caribbean: Trends and Challenges.” Inter-American Development Bank, Washington, DC.
- _____. 2016. *Time to Act: Latin America and the Caribbean Facing Strong Challenges*. Washington, DC: Inter-American Development Bank.
- Ianchovichina, E., A. Estache, R. Foucart, G. Garsous, and T. Yepes. 2013. “Job Creation through Infrastructure Investment in the Middle East and North Africa.” *World Development* 45 (May): 209–22.
- IMF (International Monetary Fund). 2014a. Is It Time for an Infrastructure Push? The Macroeconomic Effects of Public Investment. In *World Economic Outlook*. Washington, DC: International Monetary Fund.
- _____. 2014b. “Regional Economic Outlook: Middle East, North Africa, Afghanistan, and Pakistan.” International Monetary Fund, Washington, DC.
- _____. 2014c. “Regional Economic Outlook: Sub-Saharan Africa, Staying the Course.” International Monetary Fund, Washington, DC.
- _____. 2015a. *World Economic Outlook: Adjusting to Lower Commodity Prices*. Washington, DC: International Monetary Fund.
- _____. 2015b. “Recent Investment Weakness in Latin America: Is There a Puzzle?” in *Western Hemisphere Regional Economic Outlook: Northern Spring, Southern Chills*. Washington, DC: International Monetary Fund.
- _____. 2016a. “Latin America and the Caribbean: Are Chills Here to Stay?” Regional Economic Update. October. International Monetary Fund, Washington, DC.
- _____. 2016b. “Regional Economic Outlook: Middle East, North Africa, Afghanistan, and Pakistan.” International Monetary Fund, Washington, DC.
- _____. 2016c. *Sri Lanka: Staff Report for the 2016 Article IV Consultation*. Washington, DC: International Monetary Fund.
- Inderst, G., and F. Stewart. 2014. “Institutional Investment in Infrastructure in Emerging markets and Developing Economies.” Board Report. Public-Private Infrastructure Advisory Facility. Washington, DC: World Bank.
- Inderst, G. 2016. “Infrastructure Investment, Private Finance, and Institutional Investors: Asia from a Global Perspective.” Asian Development Bank Institute. Working Paper Series 555. Tokyo.
- International Energy Agency. 2014. *Special Report World Energy Investment Outlook*. Paris: International Energy Agency.
- International Finance Corporation. 2016. “Transforming African Development: Partnerships and Risk Mitigation to Mobilize Private Investment on a New Scale.” International Finance Corporation, Washington, DC.
- Jesintha, P., and M. Sathanapriya. 2011. “Public Private Partnership in India.” *Journal of Management and Science*, 1 (1): 61-68.
- Kessides, I., and N. Benjamin. 2012. “Regionalizing Infrastructure for Deepening Market Integration: the Case of East Africa.” Policy Research Working Paper 6113, World Bank.
- Kirkpatrick C., D. Parker and Y. Zhang. 2006. “Foreign Investment in Infrastructure in Developing Countries: Does Regulation Make a Difference?” *Transnational Corporations* 15 (1): 143–172.
- KPMG. 2011. “KPMG’s Bribery and Corruption Survey: Impact on Economy and Business Environment.” http://www.ibe.org.uk/userfiles/kpmg_india%20report.pdf

- Le Borgne, E., and T. Jacobs. 2016. “Lebanon: Promoting Poverty Reduction and Shared Prosperity.” Systematic Country Diagnostic, World Bank, Washington, DC.
- Lee, K., and T. Pang. 2015. “Asia and the Pacific: Health Policy Challenges of a Region in Transition.” *Asia & the Pacific Policy Studies* 2 (2): 211–213.
- Lopez-Acevedo, G., D. Medvedev, and V. Palmade. 2016. *South Asia’s Turn: Policies to Boost Competitiveness and Create the Next Export Powerhouse*. Conference Edition. World Bank.
- McKinsey Global Institute. 2011. “Powering India: The Road to 2017.” McKinsey Global Institute.
- _____. 2013. *Infrastructure Productivity: How to Save \$1 Trillion a Year*. McKinsey Global Institute.
- _____. 2014. *Southeast Asia at the Crossroads: Three Paths to Prosperity*. McKinsey Global Institute.
- _____. 2016. Bridging Global Infrastructure Gaps. In collaboration with McKinsey Capital Projects and Infrastructure Practice. McKinsey Global Institute.
- Nataraj, G. 2007. “Infrastructure Challenges in South Asia: The Role of Public-Private Partnerships.” Asian Development Bank Institute Discussion Paper 80, Asia Development Bank Institute, Tokyo.
- OECD (Organisation for Economic Co-operation and Development). 2006. *Infrastructure to 2030: Telecom, Land Transport, Water and Electricity*. Paris: Organisation for Economic Co-operation and Development.
- _____. 2011. *Strategic Transport Infrastructure Needs to 2030*. Paris: OECD.
- Pachouri, A., and S. Sharma. 2016. “Barriers to Innovation in Indian Small and Medium-Sized Enterprises.” ADB Economics Working Paper Series 588, Asian Development Bank, Manila, the Philippines.
- Perrotti, D., and R. J. Sánchez. 2011. “La brecha de infraestructura en América Latina y el Caribe.” Serie Recursos Naturales e Infraestructura no. 153. Santiago, Chile: ECLAC.
- RBS. 2011. “The Roots of Growth. Projecting EM infrastructure demand to 2030,” Emerging Markets Strategy, Royal Bank of Scotland.
- Republic of Turkey Ministry of Energy and Natural Resources. 2014. National Renewable Energy Action Plan for Turkey.
- Romer, P. 2016. “To End Poverty, Give Everyone the Chance to Learn.” Speech at the End Poverty Day Event, Dhaka, Bangladesh, October 17.
- Ruiz-Nuñez, F., and Z. Wei. 2015. “Infrastructure Investment Demands in Emerging Markets and Developing Economies.” Policy Research Working Paper 7414, World Bank, Washington, DC.
- Russian Investment Agency. 2015. “We Need Investment.”
- Shirke, S.V., and A. Srijia. 2014. “An Analysis of the Informal Labor Market in India.” *Economy Matters*, Confederation of Indian Industry, October.
- Tokuoka, K. 2012. “Does the Business Environment Affect Corporate Investment in India?” IMF Working Paper 12/70, International Monetary Fund, Washington, DC.
- UNCTAD (United Nations Conference on Trade and Development). 2016. “Investor Nationality: Policy Challenges.” World Investment Report 2016. Geneva, Switzerland.
- Winrow, G. 2015. “Realization of Turkey’s Energy Aspirations. Pipe Dreams or Real Projects?”

The Brookings Institution, Washington, DC.

World Bank. 2000. *Attracting Foreign Direct Investment in Infrastructure: Why is it so Difficult?* Washington, DC: World Bank.

———. 2006. *India: Building Capacity for Public-Private Partnerships*. Washington, DC: World Bank.

———. 2008. *The Road Not Traveled: Education Reform in the Middle East and Africa*. Washington, DC: World Bank.

———. 2010. *Global Economic Prospects 2010: Crisis, Finance, and Growth*. Washington, DC: World Bank.

———. 2011. *Learning for All: Investing in People's Knowledge and Skills to Promote Development*. Washington, DC: World Bank.

———. 2013a. *China 2030: Building a Modern, Harmonious, and Creative Society*. Washington, DC: World Bank.

———. 2014a. "Enhancing Competitiveness in an Uncertain World." East Asia and Pacific Economic Update. October issue. World Bank, Washington, DC.

———. 2015a. "East Asia's Changing Urban Landscape: Measuring a Decade of Spatial Growth." World Bank, Washington, DC.

———. 2015b. "Adjusting to a Changing World." East Asia and Pacific Economic Update. April issue. World Bank, Washington, DC.

———. 2015c. *Global Monitoring Report 2015/16: Development Goals in an Era of Demographic Change*. Washington, DC: World Bank.

———. 2015d. "Azerbaijan Systematic Country Diagnostic." World Bank, Washington, DC.

———. 2015e. "Rebalancing Bosnia and Herzegovina: A Systematic Country Diagnostic." World Bank, Washington, DC.

———. 2015f. "Bulgaria's Potential for Sustainable Growth and Shared Prosperity; Systemic Country Diagnostic." World Bank, Washington, DC.

———. 2015g. "Serbia Systematic Country Diagnostic." World Bank, Washington, DC.

———. 2015h. "Bolivia Systematic Country Diagnostic: Rebalancing Inclusive Growth to Deepen Gains on Poverty and Inequality Reduction." World Bank, Washington, DC.

———. 2015i. "Colombia Systematic Country Diagnostic." World Bank, Washington, DC.

———. 2015j. "Costa Rica's Development: From Good to Better. Systematic Country Diagnostic." World Bank, Washington, DC.

———. 2015k. "El Salvador: Building on Strengths for a New Generation; Systematic Country Diagnostic." World Bank, Washington, DC.

———. 2015l. "Guatemala: Closing Gaps to Generate More Inclusive Growth; Systematic Country Diagnostic." World Bank, Washington, DC.

———. 2015m. "Haiti: Toward a New Narrative; Systematic Country Diagnostic." World Bank, Washington, DC.

———. 2015n. "Honduras: Unlocking Economic Potential for Greater Opportunities." Systematic Country Diagnostic. World Bank, Washington, DC.

———. 2015o. "Panama: Locking in Success." Systematic Country Diagnostic, World Bank, Washington, DC.

- . 2015p. “Uruguay: Systematic Country Diagnostic.” World Bank, Washington, DC.
- . 2015q. “Egypt: Promoting Poverty Reduction and Shared Prosperity. A Systematic Country Diagnostic.” World Bank, Washington, DC.
- . 2015r. “Bangladesh: More and Better Jobs to Accelerate Shared Growth and End Extreme Poverty; A Systematic Country Diagnostic. World Bank, Washington, DC.
- . 2015s. “Africa’s Pulse.” Volume 12, October 2015. World Bank, Washington, DC.
- . 2016a. *Global Economic Prospects: Spillovers amid Weak Growth*. Washington, DC: World Bank.
- . 2016b. “Live Long and Prosper: Aging in East Asia and Pacific.” World Bank East Asia and Pacific Regional Report, World Bank, Washington, DC.
- . 2016c. “Moldova: Paths to Sustained Prosperity; A Systematic Country Diagnostic.” World Bank, Washington, DC.
- . 2016d. “Retaking the Path to Inclusion, Growth and Sustainability; Brazil Systematic Country Diagnostic.” World Bank, Washington, DC.
- . 2016e. *The Commodity Cycle in Latin America: Mirages and Dilemmas*. Washington, DC: World Bank.
- . 2016f. *Doing Business 2016: Measuring Regulatory Quality and Efficiency*. Washington, DC: World Bank.
- . 2016g. “Commodity Markets Outlook: OPEC in Historical Context.” October. World Bank, Washington, DC.
- . 2016h. *South Asia Economic Focus: Investment Reality Check*. Washington, DC: World Bank.
- . 2016i. *World Development Indicators*. Washington, DC: World Bank.
- . 2016j. “Sri Lanka Systematic Country Diagnostic: Ending Poverty and Promoting Shared Prosperity.” World Bank, Washington, DC.
- . 2016k. “Africa Region: Sustaining Growth and Fighting Poverty amid Rising Global Risks.” Regional Update 2016. World Bank, Washington, DC.
- . 2017a. *Global Economic Prospects: Weak Investment in Uncertain Times*. Washington, DC: World Bank.
- . 2017b. *Doing Business 2017: Equal Opportunity for All*. Washington DC: World Bank.
- World Bank and Development Research Center of the State Council, the People’s Republic of China. 2014. *Urban China: Toward Efficient, Inclusive, and Sustainable Urbanization*. Washington, DC: World Bank.
- World Bank and Ministry of Planning and Investment of Vietnam. 2016. *Vietnam 2035: Toward Prosperity, Creativity, Equity, and Democracy*. Washington, DC: World Bank.
- World Economic Forum. 2013. *Strategic Infrastructure: Steps to Prepare and Accelerate Public-Private Partnerships*. World Economic Forum.
- . 2015. *The Global Competitiveness Report 2015-16*. Geneva: World Economic Forum.
- . 2016. *The Global Competitiveness Report 2016-17*. Geneva: World Economic Forum.
- Yepes, T. 2008. “Investment Needs for Infrastructure in Developing Countries 2008–15”, World Bank, Washington DC.