# Global Infrastructure Development

A Strategic Approach to U.S. Leadership

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PRESTON

CSIS

A Report of the CSIS PROJECT ON PROSPERITY AND DEVELOPMENT

CENTER FOR STRATEGIC & INTERNATIONAL STUDIES

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About the Authors

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# **Executive Summary**

In May 2015, China announced that it would launch the Asian Infrastructure Investment Bank (AIIB); the immediate response in the United States, Japan, and other countries was to view the AIIB as a challenge to the existing system of international financial institutions. To be sure, some of China's rationale behind AIIB is the result of the international system's inability to implement meaningful reform of existing multilateral institutions. More importantly, the AIIB represents a response to a genuine need for greater investment to address a global infrastructure deficit. China also clearly sees the AIIB in the context of its broader foreign policy and economic objectives.

Even before the launch of AIIB, China offered countries in Africa, Southeast Asia, and Latin America financing for infrastructure projects. This support was typically offered on a concessional basis and payment was secured at least partially through access to raw materials (e.g., oil, gas, or minerals such as copper). The form of this support also differed from that offered by traditional aid donors; China generally offers countries a mix of export credits, concessional loans, and grants. Additionally, there have been perceptions that China looks at environmental, social, or governance safeguards as "an obstacle to lending."<sup>1</sup>

In recent decades traditional donors have largely eschewed providing support for infrastructure development over concerns about the ability of recipient countries to repay loans and maintain infrastructure; environmental, social, and governance issues; and a general shift toward a focus on meeting basic human needs. This trend away from supporting infrastructure development, despite a large global need, provided an opportunity for new actors such as the AIIB to enter the space. The United States in particular is largely absent in providing direct support for infrastructure, although this is not for a lack of instruments.

The World Economic Forum estimates that meeting global infrastructure needs will require investment of \$3.7 trillion annually, but the impact of this gap is best framed in human terms. There are more than 1.3 billion people worldwide who lack access to electricity due to underdeveloped electrical grids and a lack of generation capacity.<sup>2</sup> One billion people live more than two kilometers from an all-weather road,<sup>3</sup> making it difficult or impossible for many to reach a doctor, school, or market. Some 4.2 billion people do not have regular access to the internet,<sup>4</sup> leaving more than half of the world's population without use of a powerful tool that not only enables education but also facilitates economic activity and keeping government officials in check. Lack of

http://www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/.

<sup>&</sup>lt;sup>1</sup> Lean Alfred Santos, "AIIB Releases Draft Environmental and Social Safeguards, Opens Consultations," Devex, September 16, 2015, https://www.devex.com/news/aiib-releases-draft-environmental-and-social-safeguards-opens-consultations-86924.

<sup>&</sup>lt;sup>2</sup> International Energy Agency, "Energy Access Database," 2015,

<sup>&</sup>lt;sup>3</sup> World Bank, "Global Infrastructure Facility," http://www.worldbank.org/en/programs/global-Infrastructure-facility.

<sup>&</sup>lt;sup>4</sup> Phillippa Biggs, *The State of Broadband 2015* (Geneva: Broadband Commission for Digital Development, 2015), http://www.broadbandcommission.org/Documents/reports/bb-annualreport2015.pdf.

functioning infrastructure is an impediment to long-term stable economic growth, and a barrier to international investment.

Although there is a gap in financing, the key constraint is not lack of funding but rather a shortage of projects that have been planned and prepared to the point where they are ready for investment. In particular, the capacity of local governments to adequately plan, procure, and manage infrastructure projects is extremely weak. Assistance, both technical and financial, is most critically needed on the front end of infrastructure projects to develop a pipeline of well-planned and bankable infrastructure investment opportunities as well as a cadre of capable local officials. Developing countries need support in project preparation, including feasibility studies, environmental impact surveys, and similar work before the infrastructure gap can be met. It should be a long-term goal of international donors to build this capacity within developing countries themselves.<sup>5</sup>

Despite the recent step back from infrastructure work, the United States continues to provide a limited amount of direct support for infrastructure development. This can be broken into two broad buckets: direct financing or guarantees for projects through the Millennium Challenge Corporation (MCC), the Overseas Private Investment Corporation (OPIC), and U.S. Agency for International Development (USAID), and specialized support for project preparation, feasibility studies, and similar work through the U.S. Trade and Development Agency (USTDA) or sponsored project preparation facilities (PPFs). The Export-Import Bank also provides export financing for the sale of American-built infrastructure products. In addition to the U.S. government tools available, the United States remains the largest shareholder of the World Bank, the Inter-American Development Bank, and the second-largest shareholder in the African Development Bank and Asian Development Bank. This position gives the United States a large voice in strategic direction, approval of projects, and policy formulation.

What emerges from this review is that there are limitations to how the U.S. government supports infrastructure development abroad. First, the United States does not provide infrastructure support through a coordinated or strategic manner in marked contrast to other powers, such as China. Second, there are simply institutional limitations in the sense that the U.S. government moved out of the business of providing direct loans to support infrastructure development years ago. This is unlikely to change anytime soon. Third, there are significant political disagreements over whether or not it should be the business of the U.S. government to provide even the limited support it does. Finally, the U.S. government has needlessly handicapped itself by placing artificial limitations on the type of infrastructure that its agencies can support.

It is unlikely that the United States will dramatically adjust its approach to infrastructure development in the coming years. However, it can and should do more with its existing instruments. Specifically, the United States should take a two-pronged approach targeting both U.S. government agencies and multilateral institutions. Specific

<sup>&</sup>lt;sup>5</sup> For a fuller discussion of project preparation, see Helen Moser and Erin Nealer, *Barriers to Bankable Infrastructure: Incentivizing Private Investment to Fill the Global Infrastructure Gap* (Washington, DC: Center for Strategic and International Studies, March 2016).

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recommendations for international and multilateral organizations and the U.S. government include for following.

#### International and Multilateral Organization Recommendations

- Create strategic partnerships for infrastructure development.
- Seek a special capital increase for the Asian Development Bank in partnership with Japan.
- Launch a review of Multilateral Development Bank (MDB) practices
- Increase support for project preparation and capacity building.
- Roll out World Bank Procurement Reform through large-scale training of developing country public officials.

#### **U.S. Government Recommendations**

- Develop a long-term strategy for infrastructure development.
- Provide long-term congressional authorizations for critical agencies
- Provide greater support to specialized U.S. development agencies.
- Prioritize infrastructure support at the country level.
- Examine existing initiatives for money that can support infrastructure development.

# **Global Infrastructure Development**

## A Strategic Approach to U.S. Leadership

Daniel F. Runde and Conor M. Savoy, with Charles F. Rice

## Introduction

In May 2015, China announced that it would launch the Asian Infrastructure Investment Bank (AIIB), an entity—as the name suggests—specifically directed toward supporting investment in infrastructure projects. The immediate response in the United States, Japan, and other countries was to view the AIIB as a challenge to the existing system of international financial institutions. Many saw this as an attempt by the Chinese to create an alternative institution after having failed to gain greater traction for reform of the existing Bretton Woods institutions. Yet it can also be seen as a piece of China's broader strategy to reconnect Asia by building both through physical infrastructure and trade agreements. Known as the "New Silk Road Initiative" or "One Belt-One Road," since 2013 China has sought to improve its linkages to its neighbors and recreate the centuries-old trade route through Central Asia to Europe. This represents a massive undertaking, but has the full weight of the Chinese government and business behind it.

To be sure, some of China's reasoning behind AIIB is the result of the international system's inability to implement meaningful reform of existing multilateral institutions. It took the United States six years to pass legislation that would implement IMF Quota Reform, first proposed in 2010. More importantly, the AIIB also represents a response to a genuine need for greater investment to address a global infrastructure deficit and another facet toward achieving China's broader foreign and economic objectives. Although the World Bank and regional development banks provide about \$50 billion per year in loans, guarantees, and equity for infrastructure projects,<sup>1</sup> there is a significant gap remaining. The AIIB, which will likely disburse around \$2 billion in loans over its first year of operation,<sup>2</sup> will initially not reduce this gap greatly, yet it promises to move more swiftly to approve projects and finance projects that the multilateral development banks (MDBs) and bilateral donors may not fund for environmental, social, or governance reasons. Estimates for the gap in financing run as high as \$7 trillion worldwide; at a regional level, the World Bank estimates that sub-Saharan Africa alone has an unfunded gap of \$93 billion per year.

Even before the launch of AIIB, the field of infrastructure finance was changing rapidly as new providers entered. This is particularly true of China, which beginning in the early 2000s offered countries in Africa, Southeast Asia, and Latin America financing for

<sup>&</sup>lt;sup>1</sup> Chris Humphrey, Infrastructure Finance in the Developing World (Seoul: The Global Green Growth Institute, 2015), http://g24.org/wp-content/uploads/2015/06/MARGGK-WP08.pdf. <sup>2</sup> Alfonso Esparza, "AIIB Says Japan and US Participation Not Needed," MarketPulse, October 23, 2015,

http://www.marketpulse.com/20151023/aiib-says-japan-and-us-participation-not-needed/.

infrastructure projects. As the Chinese economy boomed, it looked abroad for raw materials that it found in abundance in developing countries. China offered countries financing for power, transportation, port facilities, and other infrastructure projects; most often this was offered on a concessional basis and was secured at least partially through payment by access to raw materials (e.g., oil, gas, or minerals such as copper).

Unlike traditional aid donors, China generally offers countries a mix of export credits, concessional loans, and grants; importantly, much of China's aid is directed toward infrastructure development and it was untied.<sup>3</sup> The latter part is particularly important, because most traditional bilateral and multilateral donors frequently "tie" their aid to regulatory reforms, good governance, human rights, and other issues that sovereign nations may find intrusive. The AIIB, for its part, has not yet released a final framework for environmental and social standards that many fear may be more lax than at comparable institutions. The AIIB did release a draft framework for environmental and social standards that many fear may be more lax than at social standards for discussion in September 2015. Provisions allowing coal and nuclear investment, lack of a grievance mechanism, and limited protection of indigenous peoples have fueled perceptions that the AIIB looks at safeguards as "an obstacle to lending."<sup>4</sup>

China's approach is in marked contrast to that of traditional Organization for Economic Cooperation and Development (OECD) donors. Many of these have largely eschewed providing infrastructure financing or other forms of support for infrastructure development. Donors exited this over concerns about the ability of recipient countries to repay loans and maintain infrastructure, environmental, social, and governance issues, and a general shift toward a focus on meeting basic human needs. The United States in particular is largely absent in providing direct support for infrastructure—though this is not for a lack of instruments. The U.S. government has entities and instruments that provide a variety of assistance helpful for infrastructure investment and development. This includes specialized agencies such as the U.S. Trade and Development Agency, Export-Import Bank, or Overseas Private Investment Corporation, as well as the U.S. Agency for International Development and Millennium Challenge Corporation. Though these technical instruments are varied, unlike China and other emerging powers, the United States does not deploy them in a coordinated or strategic manner to achieve its long-term foreign policy objectives.

In addition to the U.S. government tools available, the United States remains the largest shareholder of the World Bank, the Inter-American Development Bank, and the secondlargest shareholder in the African Development Bank and Asian Development Bank. This position gives the United States a large voice in strategic direction, approval of projects, and policy formulation. Moreover, all of these institutions provide a large amount of financing targeted toward infrastructure. For example, in fiscal year 2014, the World

<sup>&</sup>lt;sup>3</sup> The degree to which Chinese aid is "untied" is a matter of much debate given that it does come with preconditions. First, for a country to receive aid it cannot recognize Taiwan; China has used its financial clout to successfully convince a number of countries to withdraw recognition from Taipei. Second, China frequently requires that countries use its construction companies, suppliers, and workers to build or repair the infrastructure in question.

<sup>&</sup>lt;sup>4</sup> Lean Alfred Santos, "AIIB Releases Draft Environmental and Social Safeguards, Opens Consultations," Devex, September 16, 2015, https://www.devex.com/news/aiib-releases-draft-environmental-and-socialsafeguards-opens-consultations-86924.

Bank provided a total of \$24 billion in commitments for infrastructure projects.<sup>5</sup> The African Development Bank, recognizing the continent's infrastructure gap, has made the funding of projects a priority with over 50 percent of its loans going toward infrastructure.<sup>6</sup> The ADB directs approximately 80 percent of its financing toward infrastructure. Yet a perception exists that these institutions are hobbled by overly stringent environmental, governance, and social review processes that limit their ability to quickly approve projects.



Although there is a gap in financing, the key constraint is not lack of funding but rather a shortage of projects that have been planned and prepared to the point where they are ready for investment. In particular, the capacity of local governments to adequately plan, implement, and manage infrastructure projects is extremely weak. Assistance, both technical and financial, is most critically needed on the front end of infrastructure projects to develop a pipeline of well-planned and bankable infrastructure investment opportunities. Developing countries need support in project preparation, including feasibility studies, environmental impact surveys, and similar work before the infrastructure gap can be met. This is an area where donors could play a unique role. In the short term, donors can help support project preparation-related activities, but it

<sup>&</sup>lt;sup>5</sup> World Bank, "World Bank Group's Infrastructure Spending Increases to US\$24 Billion," July 18, 2014, http://www.worldbank.org/en/news/press-release/2014/07/18/world-bank-group-infrastructure-spending-increases-to-24-billion.

<sup>&</sup>lt;sup>6</sup> African Development Bank Group, 2014 Annual Report, December 31, 2014,

http://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Annual\_Report\_2014\_-Full.pdf.

should be a goal of international donors to build this capacity within developing countries themselves.<sup>7</sup>

## The Opportunity: Lack of Quality Infrastructure

Of course, the question remains why infrastructure is important for a country or for development agencies to invest in and support. Lack of functioning infrastructure is an impediment to long-term stable economic growth, and one that over time will limit a country's ability to develop its service and industrial base. The World Bank notes three ways in which infrastructure contributes to economic growth: infrastructure like roads, water, electricity, and telecommunications raise productivity and increase return on investment; infrastructure leads to economic diversification and the development of new markets by linking distant parts of the country together; social infrastructure including schools and hospitals aid in the development of human capital.<sup>8</sup> One study estimates that a country needs to spend between 5 and 6 percent of gross domestic product (GDP) on infrastructure in order to sustain economic growth.<sup>9</sup> There is a clear consensus that functioning infrastructure is one of the underlying conditions necessary for driving economic growth at both national and regional levels.

Infrastructure financing remains a problem across a number of regions, with the World Economic Forum estimating annual needs of around \$3.7 trillion. This is particularly acute in developing regions such as sub-Saharan Africa and Southeast Asia. These regions are expected to drive growth in the coming decades as per capita incomes rise and a concurrent number of people rise from poverty to the middle class. But without functioning infrastructure these countries will struggle to maintain their growth and provide opportunity for their populations. Lack of infrastructure is a hindrance to greater foreign direct investment and the development of a local, vibrant private sector. Local and international business regularly ranks lack of functioning infrastructure as a top barrier to investment.<sup>10</sup> Without well-planned and functioning infrastructure the economic growth needed to continue to lift individuals out of poverty will be far more difficult to achieve.

Estimates of the global infrastructure gap are measured in the trillions of dollars, and this can be difficult to comprehend. To put the gap into more meaningful terms, there are more than 1.3 billion people worldwide who do not have access to electricity due to underdeveloped electrical grids and a lack of generation capacity.<sup>11</sup> One billion people

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http://www.ey.com/Publication/vwLUAssets/EY-africa-attractiveness-survey-2015-making-choices/$FILE/EY-africa-attractiveness-survey-2015-making-choices.pdf.
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<sup>&</sup>lt;sup>7</sup> For a fuller discussion of project preparation, see Helen Moser and Erin Nealer, *Barriers to Bankable Infrastructure: Incentivizing Private Investment to Fill the Global Infrastructure Gap* (Washington, DC: Center for Strategic and International Studies, March 2016).

<sup>&</sup>lt;sup>8</sup> Christine Kessides, *The contributions of infrastructure to economic development* (Washington, DC: World Bank, 1993), http://documents.worldbank.org/curated/en/1993/09/698896/contributions-infrastructure-economic-development-review-experience-policy-implications.

<sup>&</sup>lt;sup>9</sup> Amar Bhattacharya, Mattia Romani, and Nicholas Stern, "Infrastructure for development: meeting the challenge," policy paper, London School of Economics, 2012, 10.

<sup>&</sup>lt;sup>10</sup> Ernst and Young, *EY's Attractiveness Survey: Africa 2015*, 2015,

<sup>&</sup>lt;sup>11</sup> International Energy Agency, "Energy Access Database," 2015,

http://www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/.

live more than two kilometers from an all-weather road,<sup>12</sup> making it difficult or impossible for many to reach a doctor, school, or market. Some 4.2 billion people do not have regular access to the internet,<sup>13</sup> leaving more than half of the world's population without access to a powerful tool not only for education but also for facilitating economic activity or keeping government officials in check. Whether measured in dollars or in the number of people without electricity, the infrastructure gap is massive.

Development assistance alone cannot close this gap. Total global development assistance equaled just over \$150 billion last year, meaning financing the infrastructure gap would require 20 times the total ODA each year. This will not increase dramatically in the next 10–15 years. Yet the truth is that even now most infrastructure finance is not provided by donors; rather it comes from a mix of financing sources, with the majority drawn from domestic resources. In October 2014, the International Monetary Fund (IMF) estimated that in 2012 sub-Saharan Africa spent the following on infrastructure: \$59.4 billion of public investment, issued \$1.8 billion worth of sovereign bonds, received \$13.4 billion from China, \$2.1 billion from private banks, \$2.4 billion from OECD donors, and \$2.5 billion from the Arab Coordination Group.<sup>14</sup> Thus traditional donors provided only *3 percent* of infrastructure financing in 2012; domestic sources provided *75 percent*. This investment was, as the IMF noted, "facilitated by more domestic fiscal space through debt relief, revenue collection, and gains from the commodity price boom."<sup>15</sup>

It is important to keep in mind, though, that the gap is not just about financing. One area that is less discussed in the contemporary debate around financing for infrastructure is the role that good public administration plays in facilitating this investment. Without proper regulations, a transparent procurement system, strategic planning mechanisms, and well-trained staff, it is unlikely that a notional infrastructure project will find financing. Infrastructure projects have long life spans, and require consistent support from sponsor governments in order to succeed. A lack of capacity or commitment on the part of the government leads to elevated political risk for prospective investors in both the public and private sectors. These institutional conditions are important considerations in assessing the viability of any infrastructure project.

A similar challenge manifests when it comes to a country's ability to maintain infrastructure once it has been constructed. According to a World Bank estimate, if African nations had spent \$12 billion more on road repairs in the 1990s they could have been spared from \$45 billion in road reconstruction costs later. In other words, readily accessible access to financing for infrastructure maintenance as well as the capacity to

<sup>&</sup>lt;sup>12</sup> World Bank, "Global Infrastructure Facility," http://www.worldbank.org/en/programs/global-Infrastructure-facility.

<sup>&</sup>lt;sup>13</sup> Phillippa Biggs, *The State of Broadband 2015* (Geneva: Broadband Commission for Digital Development, 2015), http://www.broadbandcommission.org/Documents/reports/bb-annualreport2015.pdf.

<sup>&</sup>lt;sup>14</sup> Céline Ällard, *Regional Economic Outlook: Sub-Saharan Africa, October 2014* (Washington, DC: International Monetary Fund, 2014), https://www.imf.org/external/pubs/ft/reo/2014/afr/eng/sreo1014.pdf.

carry out necessary maintenance is crucial for keeping infrastructure costs in check, even after the initial construction bill is paid.<sup>16</sup>

One area that requires far more attention is public procurement reform. The World Bank recently launched a review of its own procurement practices, which from its inception emphasized lowest bid in order to reduce the possibility of corruption. This method has come under criticism as it does not account for the quality of the product or expected maintenance costs over the span of use. The new World Bank standard will emphasize life-cycle cost analysis (LCCA) in procurement bidding, and should lead to infrastructure investments that deliver greater value at lower costs over time. Unfortunately, many developing country procurement officials lack the capacity to undertake complex value analysis when making infrastructure procurement decisions. As infrastructure needs become more complex, developing countries will need to increase the capacity of their professional procurement officials to ensure that they maximize the value of infrastructure investments.

#### Country Case Study: The Philippines

The Philippines has been one of the fastest-growing economies in Asia over the last five years, and is likely to continue this trend of strong economic expansion in the decades to come. Since 2010, GDP growth has averaged 6.33 percent, ranking behind only Singapore and China as the fastest-growing Asian economy.<sup>17</sup> To ensure that this growth is sustained, and leads to reductions in unemployment, absolute poverty, and income inequality,<sup>18</sup> the Philippines must address pressing infrastructure needs. The World Economic Forum, in its annual competiveness index, ranked the Philippines infrastructure 91 out of 144 countries,<sup>19</sup> with clear infrastructure needs in ports, air transport, energy, and urban mass transport.

These infrastructure deficiencies translate into large economic losses, and slow investment and development. The Japan International Cooperation Agency (JICA) estimated that the average speed on Metro Manila roads was only 10 kilometers per hour, leading to an annual economic cost of \$27.2 billion in the Mega Manila region.<sup>20</sup> One needs only to drive in the city to see that this is true. Air transport, which is particularly critical given the Philippine's archipelagic geography, is also a source of major bottlenecks and lost efficiency. The Civil Aviation Authority has estimated that airlines accrue losses of nearly \$160 million per year due to congestion at the Ninoy

<sup>&</sup>lt;sup>16</sup> Gregory Ingram, *World Development Report 1994: Infrastructure for Development* (Washington, DC: World Bank, 1994), https://openknowledge.worldbank.org/bitstream/handle/10986/5977/WDR%201994%20-%20English.pdf?sequence=2&isAllowed=y.

<sup>&</sup>lt;sup>17</sup> KPMG, Infrastructure in Depth: The Philippines., 2015,

http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/infrastructure-in-depth-philippines.pdf.

<sup>&</sup>lt;sup>18</sup> Gloria Steele, John Avila, Daniel Miller, and Gerald Britan, "Ending Extreme Poverty in the Philippines through Urban-Led Growth," USAID, September 6, 2014,

https://www.usaid.gov/frontiers/2014/publication/section-3-ending-extreme-poverty-in-the-phllippines. <sup>19</sup> World Economic Forum, "Global Competitiveness Report 2014–2015,". http://reports.weforum.org/globalcompetitiveness-report-2014-2015/economies/#indexId=GCI&economy=PHL.

<sup>&</sup>lt;sup>20</sup> National Economic Development Authority, *Roadmap for Transport Infrastructure Development for Metro Manila and its Surrounding Areas*, 2014, http://www.neda.gov.ph/wp-content/uploads/2015/03/FR-SUMMARY.-12149597.pdf.

Aquino International Airport.<sup>21</sup> The Philippines also suffers from poor energy infrastructure, leading to the highest electricity prices in Asia and an extremely low rate of per capita electricity consumption.<sup>22</sup>

The Philippine government has recognized the need for improving its infrastructure, and the midterm update of the Philippine Development Plan 2011–2016 directs significant public investment toward addressing this challenge. Over the period of the plan, the Public Investment Program allocates \$55.7 billion toward accelerating infrastructure development; this accounts for roughly 53 percent of spending under the program. In the first quarter of 2014, government infrastructure spending grew by over 60 percent, and the development plan calls for infrastructure spending to reach 5.1 percent of total capital outlay by 2016.<sup>23</sup> Recent discussions in Manila, however, indicated that the government is only spending a little over 2 percent of GDP on infrastructure.

This renewed effort around infrastructure investment has been made possible by improvements in the Philippines' macroeconomic stability, including in fiscal and monetary policy, over the last decade. Strong economic performance and the credibility of the current government have led to a series of jumps in sovereign credit rating, making it easier for the government to raise capital.<sup>24</sup> Fiscal policy reform and improved tax administration have also increased the available funds for government spending, with tax revenue more than doubling from \$23.6 billion in 2007 to \$50.3 billion in 2013.<sup>25</sup>

Public-private partnerships also play an important role in the Philippines' infrastructure project, particularly following the 2012 revision of the Implementing Rules and Regulations (IRR) for its build-operate-transfer (BOT) law that enables greater privatesector participation in infrastructure projects.<sup>26</sup> This move should help the Philippines attract more private investment to fill its financing shortfall. While the Philippine government needs continue to improve its capacity for central planning as it relates to infrastructure development, it has demonstrated both the capacity and will to begin closing its infrastructure gap.

## **U.S.** Government Support for Infrastructure Development

In the post–World War II period, the U.S. government provided significant funds for the development of infrastructure in newly independent countries and other developing countries. This included support through initiatives such as the Alliance for Progress in Latin America, which helped create the Pan-American Highway system, as well as direct bilateral support to countries for specific projects. Bilateral projects included, for example, the Akosombo Dam in Ghana built with the support of the U.S. government,

<sup>&</sup>lt;sup>21</sup> Miguel Camus, "Airlines Losing P7 Billion Due to Congested Airport," *Philippine Daily Inquirer*, May 29, 2014, http://business.inquirer.net/171661/airlines-losing-p7-billion-due-to-congested-airport.

<sup>&</sup>lt;sup>22</sup> KPMG, Infrastructure in Depth: The Philippines, 2015.

<sup>&</sup>lt;sup>23</sup> Ibid.

<sup>&</sup>lt;sup>24</sup> Steele "Ending Extreme Poverty in the Philippines through Urban-Led Growth."

<sup>&</sup>lt;sup>25</sup> Conor Savoy, Taxes and Development: The Promise of Domestic Resource Mobilization (Washington, DC: Center for Strategic and International Studies, December 2014),

http://csis.org/files/publication/141203\_Savoy\_TaxesDevelopment\_Web.pdf. <sup>26</sup> Philippines Rep. Act No. 7718 (1993), The Philippines Build-Operate-Transfer (BOT) Law,

https://ppp.gov.ph/wp-content/uploads/2015/01/BOT-IRR-2012\_FINAL.pdf.

World Bank, and United Kingdom between 1961 and 1965.<sup>27</sup> Broadly, this type of assistance fit the U.S. approach to international development in the 1950s and 60s, which focused on institutional capacity building, public administration, infrastructure, training, and other projects that sought to build stable, well-governed countries.

For a variety of reasons, U.S. assistance underwent a dramatic reorientation in the early 1970s with the advent of the "Basic Human Needs" agenda. This new approach to development was driven largely by congressional concern over growing corruption, mismanagement of resources by developing country governments, and a sense that a "top-down" approach had failed to deliver the promised economic growth. Basic Human Needs shifted U.S. foreign assistance away from this "top-down" to a "bottom-up" grassroots approach that prioritized human development, that is, public health, basic education, and small-holder rural development. By and large, this approach remains true to this day.

The United States continues to provide a limited amount of direct support for infrastructure development. This can be broken into two broad buckets: direct financing or guarantees for projects through the Millennium Challenge Corporation (MCC), Overseas Private Investment Corporation (OPIC), and USAID, and specialized support for project preparation, feasibility studies, and similar work through the U.S. Trade and Development Agency or sponsored project preparation facilities (PPFs). In addition, the Export-Import Bank provided export financing for the sale of American built infrastructure products; however, its congressional authorization expired in July 2015 and was only renewed following a five-month lapse in its charter. The final legislation reauthorizing Export-Import through September 2019 was passed with bipartisan support by both the House and Senate on December 4, 2015, and signed into law by President Obama the next day.<sup>28</sup> Despite Export-Import's reauthorization, continued support of infrastructure development is frequently hampered by political disagreements or through internal restrictions that limit its effectiveness.

One departure from the general U.S. approach has been support for infrastructure development in the wake of natural disasters, or during reconstruction following a war. Recent examples include work in Afghanistan and Iraq, Haiti following the 2010 earthquake, and Indonesia after the 2004 Tsunami. Beginning in 2002, the United States provided over \$2 billion for road rehabilitation projects across Afghanistan and over \$2 billion for power projects. This investment has yielded results with over 1,800 kilometers of roads being built or rehabilitated (including the "Ring Road," a major highway linking Afghanistan's provinces) and 130 megawatts of electricity capacity coming on line.<sup>29</sup> Yet a number of organizations, including the Government Accountability Office and the Special Inspector General for Afghanistan Reconstruction, have raised concerns about the long-term sustainability of these investments. Primarily this is related to the capacity

<sup>29</sup> Ū.S. Energy Information Administration, "International Energy Statistics—Afghanistan Electricity Capacity," http://www.eia.gov/cfapps/ipdbproject/

iedindex3.cfm?tid=2&pid=2&aid=7&cid=AF,&syid=2002&eyid=2012&unit=MK.

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<sup>&</sup>lt;sup>27</sup> Volta River Authority, "Akosombo Hydro Plant,"

http://web.archive.org/web/20131213155156/http://www.vra.com/our\_mandate/akosombo\_hydro\_plant.php. <sup>28</sup> Nick Timiraos, "Export-Import Bank Is Revived," *Wall Street Journal*, December 9, 2015,

http://www.wsj.com/articles/export-import-bank-set-for-renewal-1449265587.

of the government of Afghanistan (central and provincial level) to properly maintain the transportation network and power plants constructed.

In the cases of Haiti and Indonesia, USAID provided financing for infrastructure projects in the wake of natural disasters that devastated large parts of the two countries. Following the 2004 Indian Ocean tsunami, much of the infrastructure in the province of Aceh in Indonesia was destroyed. In one instance, USAID provided \$245 million in May 2005 to rebuild a 150-mile stretch of highway and awarded five contracts for this project: three contracts for construction, one contract for design and supervision, and one for project management. Given problems with the project, the original parameters were scaled back and the timeline extended in order to complete the highway. Ultimately 91 miles were completed in April 2012, yet a review by the Government Accountability Office (GAO) found that the Indonesian government department responsible for road maintenance lacked the capacity to maintain the road, which risked the long-term sustainability of the finished highway.<sup>30</sup> Though the project achieved its objectives in reconstructing a stretch of highway destroyed by the Tsunami and the road constructed was far superior to what existed before, it still fell short of providing improvements that were sustainable in the long term.

## Financing of Infrastructure Projects

USAID, with the exception of the examples described above, does not provide financing for infrastructure projects. Most financing is now provided through the Millennium Challenge Corporation through its compact process, the Overseas Private Investment Corporation through its debt products, and the Export-Import Bank that provides export credit financing.

### Millennium Challenge Corporation

Created in 2004, the Millennium Challenge Corporation (MCC) is a specialized U.S. development agency that seeks to work with countries seen to be reforming countries that are embracing democratic governance and liberal market-orientated economic reforms. Once a country was selected for a compact, MCC and the country signed a five-year large-dollar grant that would seek to address key constraints to growth. MCC and the country jointly conduct a constraints analysis to identify three to five projects that will compose the agreed upon compact. Unsurprisingly many of the initial compacts developed found that lack of infrastructure posed a problem and ultimately included an infrastructure project as part of the compact. By one measure, 70 percent of MCC's funding was at one point directed toward infrastructure; 20 of 31 compacts to date have included an infrastructure with almost all early compacts containing at least one

<sup>&</sup>lt;sup>30</sup> U.S. Government Accountability Office (GAO), *Actions Needed to Help Ensure Quality and Sustainability of USAID Road in Indonesia*, GAO-12-728 (Washington, DC: GAO, 2012), http://www.gao.gov/products/GAO-12-728.

<sup>&</sup>lt;sup>31</sup> Curt Tarnoff, *Millennium Challenge Corporation* (Washington, DC: Congressional Research Service, 2015), https://www.fas.org/sgp/crs/row/RL32427.pdf.

infrastructure project.<sup>32</sup> More recent compacts have tended toward policy reform, capacity building, and training.

MCC is, of course, limited in the number of the countries it can work in. This is by design, but it does mean that eligible countries must pass a stringent set of hurdles on governance, corruption, and economic policy before it can develop a compact. This stringency, while a good thing, does mean that the number of countries where the United States is directly working on infrastructure projects is small. This country focus should not change. MCC should continue to finance infrastructure projects through its compact process. To be sure, MCC's expansion into supporting broader policy reform and improvement of investment climate has proven beneficial. These activities, however, should not supplant MCC's early focus on infrastructure given the huge gap in infrastructure finance globally.

## Overseas Private Investment Corporation<sup>33</sup>

Spun off from USAID in 1971, OPIC operates as the U.S. government's development finance institution (DFI) that helps to facilitate U.S. private investment to developing countries. It provides a series of direct loans, loan guarantees, and risk insurance with a current portfolio of \$18 billion in 100 countries. In 2014, the Overseas Private Investment Corporation (OPIC) provided \$2.96 billion in new commitments roughly broken down to \$2.58 billion in financing and \$379.7 million in insurance.<sup>34</sup>

OPIC, however, faces limitations and challenges in how big of a role it can play in financing infrastructure. First, it has functioned in political limbo since 2008 after its congressional authorization lapsed for six months. Since then it has operated under a series of short one-year authorizations. This uncertainty has limited OPIC's ability to grow its staff, which would allow it to increase its portfolio size from approximately \$18 billion to its authorized ceiling of \$29 billion.<sup>35</sup> Second, since 2007 OPIC has operated under the so-called "carbon cap," which means that it will not provide financing for carbon producing energy sources (i.e., oil, natural gas, and coal-fired power plants). These requirements are among the most stringent for any DFI around the world, and hamper OPIC's ability to deliver on its mission of solving critical development challenges.

## Infrastructure Project Support

## U.S. Trade and Development Agency

The U.S. Trade and Development Agency (USTDA) is a specialized U.S. development agency that supports exports of U.S.-manufactured goods and services in emerging

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<sup>&</sup>lt;sup>32</sup> Ibid.

 <sup>&</sup>lt;sup>33</sup> For a broader overview of OPIC, see Daniel F. Runde et al., *Sharing Risk in a World of Dangers and Opportunities: Strengthening U.S. Development Finance Capabilities* (Washington, DC: Center for Strategic and International Studies, December 2011), http://csis.org/files/publication/111205\_Runde\_SharingRisk\_Web.pdf.
<sup>34</sup> Overseas Private Investment Corporation, 2014 Annual Report, 3–4,

https://www.opic.gov/sites/default/files/files/opic-fy14-annual-report.pdf.

<sup>&</sup>lt;sup>35</sup> Ôverseas Private Investment Corporation, *Congressional budget justification*, 2015,

https://www.opic.gov/sites/default/files/files/opic-cbj-2015.pdf.

markets and business growth in similar areas. USTDA is critical to infrastructure development, because it offers products and services geared toward the early stage of project development. This includes various types of project preparation such as feasibility studies, environmental impact surveys, and other strategic planning functions.

In addition to the programs outlined above, USTDA has recently launched the Global Procurement Initiative, which is aimed at helping countries reform their procurement processes and build capacity. GPI helps countries integrate life-cycle cost analysis and best-value determination into their procurement decisionmaking process through training, technical assistance, and advisory services. Thus far USTDA has partnered with Botswana, Vietnam, Romania, Ethiopia, and the Philippines to train over 440 officials. GPI sees potential partners in 10 other countries: Mexico, Jamaica, Panama, Colombia, Turkey, Jordan, Kenya, Tanzania, Mozambique, and India.<sup>36</sup> As the World Bank adopts its new procurement regulations it is likely that demand for services such as GPI will grow exponentially. Ultimately, the scale of these types of training operations will have to be increased by orders of magnitude to have the necessary impact.

#### Power Africa

Launched in 2011, Power Africa is a presidential initiative aimed at bridging sub-Saharan Africa's electricity gap—the continent being the most under-electrified area in the world. Lack of access on the continent is striking: 57 percent of Africans (621 million people) lack access to electricity, the continent produces a total of 422 terawatts less than the total produced by France, and power consumption per capita is just 540 kilowatthours per year or the equivalent of powering a 100-watt light bulb for 15 hours. These statistics are striking, and indeed the World Bank identifies access to electricity as sub-Saharan Africa's number one infrastructure deficit. Power Africa is unique in U.S. government support for infrastructure in that it seeks to draw upon the spectrum of support under one program. Moreover, it is designed to facilitate private-sector investment in the power sector and not simply public financing. Initially it set a goal of increasing electricity generation by 10,000 MWs, though as of August 2014 that goal is now 30.000 MWs.37

Power Africa provides transaction support, power-sector reform advocacy, legal assistance, energy service delivery capacity-building, private-sector finance and investment mobilization, regional electricity and energy trade expansion, and support for low-emission energy development and clean energy. U.S. government agencies that support Power Africa include USAID, OPIC, MCC, USTDA, and Export-Import Bank. In addition to U.S. government agencies, Power Africa has also formed partnerships with bilateral donors such as Sweden and multilateral donors such as the African Development Bank, World Bank, and European Union.

<sup>&</sup>lt;sup>36</sup> U.S. Trade and Development Agency, "Promoting Value Based Procurement as a Tool for Economic Growth," https://www.ustda.gov/sites/default/files/pdf/program/gpi/

GPIOverviewBrief\_BusinessDevelopment.pdf.

<sup>&</sup>lt;sup>37</sup> Nicolas Cook, Richard J. Campbell, Phillip Brown, and Michael Ratner, *Powering Africa: Challenges of and* U.S. Aid for Electrification in Africa (Washington, DC: Congressional Research Service, 2015), https://www.fas.org/sgp/crs/row/R43593.pdf.

Though Power Africa is good step forward in terms of its focus on infrastructure, it does face some limitations. First, it is a presidential initiative that could go away should the next president choose to prioritize something else. This risk has been mitigated by the Electrify Africa Act, legislation permanently authorizing Power Africa benefits, which was passed into law on February 8, 2016.<sup>38</sup> Second, there has been a shortage in the pipeline of transactions for which Power Africa hoped to provide support. While the initiative has helped generate transactions expected to generate over 4,100 megawatts of power,<sup>39</sup> there has been difficulty identifying projects ready to be transacted. Instead, there has been a shift in focus to help develop a pipeline of projects prepared for investment.

USAID has approximately 100 private-sector partners that have pledged 15 GW of projects and over \$20 billion in commitments for power generation. This includes:<sup>40</sup>

- AFCORP Investments (PTY) Ltd will establish a \$250 million pension-backed renewable energy fund focused on funding market-based development of smallto medium-scale renewable energy ventures in East Africa.
- African Finance Corporation seeks to complete the 340 MW Cenpower (Kpone) project in Ghana, finance a 30 MW geothermal power project in Kenya, and provide \$200 million to support the privatization of the Nigerian electricity sector. It also aims to catalyze over a \$1billion in investment for energy projects in the Power Africa Countries over the next five years.
- Aldwych International will construct a 450 MW Azura-Edo power project in Nigeria, an investment of some \$700 million.
- **Black Rhino Group** intends to develop up to 3,940 MW of additional generating • capacity in Nigeria and Djibouti through the development of both solar and natural gas-fired generation projects, and develop a \$3 billion offshore natural gas pipeline system to reduce flaring of gas in Nigeria.
- **Denham Capital Management** and three of its portfolio companies (Endeavor Energy Holdings, BioTherm Energy, and Fotowatio Renewable Ventures) seek to invest in 1,000 MW of power generation in West Africa including wind power generation, solar power generation, and thermal power generation, representing a total investment of over \$1 billion, with a special focus on Ghana.
- **GG Energy Holdings** intends to invest approximately \$550 million in sustainable energy projects; this includes \$200 million in solar PV power plants in Tanzania, \$150 million for solar PV and biomass power facilities in Ghana, Kenya, and

<sup>&</sup>lt;sup>38</sup> Electrify Africa Act of 2015, S.2152, 114th Cong., 2nd sess. (2016), https://www.congress.gov/bill/114th-congress/senate-bill/2152/all-actions.

<sup>&</sup>lt;sup>39</sup> The White House, Office of the Press Secretary, "Fact Sheet: Power Africa," July 25, 2015,

https://www.whitehouse.gov/the-press-office/2015/07/25/fact-sheet-power-africa. <sup>40</sup> U.S. Agency for International Development, "Power Africa: Private Sector Partners," November 25, 2015, https://www.usaid.gov/powerafrica/privatesector.

Tanzania, and \$200 million to construct at least 100 MW of sustainable energy logistical centers in the target countries

- **Harith General Partners** will invest \$70 million in equity finance into the Lake Turkana Wind Power project, a wind farm in Kenya poised to provide 300 MW of clean power, and inject over \$500 million in equity finance into projects such as Azura Power (Nigeria) and the Singida Wind Farm (Tanzania).
- **Hecate Energy** will invest \$800 million in PV solar projects, including a 50 MW PV solar project selling wholesale power in Tanzania's capital city of Dodoma
- **Reykjavik Geothermal** intends to complete the Corbetti Project, a \$2 billion 500 MW geothermal power plant in Ethiopia, complete an additional \$2 billion 500 MW of geothermal development in Ethiopia, and catalyze at least \$2 billion in investment for energy projects in Power Africa countries.
- **Symbion Power** will complete a 400 MW power plant in Mtwara, Tanzania, complete two small-scale biomass projects in Kigoma and Tunduru that will replace diesel-based power for these two mini-grids, rehabilitate a 972 MW gas-fired power plant in Ugheli, Nigeria, and develop a 450 MW gas-fired power plant in Ghana.

## **Conclusions and Recommendations**

What emerges from this review is that there are limitations to how the U.S. government supports infrastructure development abroad. First, the United States does not provide infrastructure support through a coordinated or strategic manner in marked contrast to other powers, such as China. Second, there are simply institutional limitations in the sense that the U.S. government moved out of the business of providing direct loans to support infrastructure development years ago. This is unlikely to change anytime soon. Third, there are significant political disagreements over whether or not it should be the business of the U.S. government to provide even the limited support it does. This is best demonstrated by the drawn-out struggle in Congress to renew the long-term authorization of the Export-Import Bank and the continued short-term authorization that OPIC has experienced since 2008. Finally, the U.S. government has needlessly handicapped itself by placing artificial limitations on the type of infrastructure that its agencies can support. The "carbon cap" is the most prominent example of these limitations.

The U.S. government does retain significant resources and instruments to support infrastructure development. As should be clear, the United States is not completely absent from this issue, but it has hobbled itself through lack of a clear strategy and political disagreements. This includes some financing of projects through MCC, OPIC, and on a more limited basis at USAID, and perhaps more importantly, tools that may be more valuable to generating bankable infrastructure projects. In particular, it provides support for project preparation, feasibility studies, and capacity-building support so that countries can properly plan strategic infrastructure investments. In many ways this support may be more valuable that simply providing another source of loans and financing.

Though these technical instruments are important, their impact is limited by a lack of coordination and overarching strategy to use them to support long-term U.S. foreign, economic, and national security policy objectives. The United States remains the world's largest foreign aid donor, providing over \$30 billion per year. There is a clear opportunity to leverage these resources more effectively through a strategic approach to global infrastructure development.

This paper does not dwell on the political challenges facing the U.S. Export-Import Bank, but it should be noted that it provides finance to support U.S. companies pursuing infrastructure work internationally. Ex-Im provides government-backed funding and credit insurance for large infrastructure deals, without which the investment would no longer be viable. Some recent examples of this type of support include \$155 million for a hospital-expansion project in Ghana, \$108 million for locomotive kits in South Africa, and projects under the Power Africa initiative.<sup>41</sup> Ex-Im also provided financing to help rebuild infrastructure in Chile following an 8.8 magnitude earthquake in 2010.<sup>42</sup> Ex-Im's authorization was allowed to lapse in July 2015, and it took until December 2015 for the bank to be reauthorized through the Omnibus Appropriations Act. This reauthorization is good for four years.

China's approach to infrastructure is not without problems, many of which have been well documented in recent years. Chinese investment in resource-rich Zambia became a political issue in the 2011 presidential election amid perceptions that China was flouting labor laws and fostering corruption, and the pro-China incumbent was voted out of office.<sup>43</sup> There are also concerns around the quality of Chinese-built infrastructure, both in China and internationally.<sup>44</sup> While Chinese firms have benefited greatly from low-bid procurement processes, the new World Bank procurement standards based on life-cycle cost assessment will likely reduce this advantage. As the focus turns toward quality and long-term return on investment, China may find that it faces stronger competition in the provision of infrastructure internationally. Given China's more assertive foreign policy under President Xi Jinping, some countries may also be more hesitant to hire Chinese firms to build critical national infrastructure. Yet China has also demonstrated through AIIB, its New Silk Road Initiative, and others that it has a strategic approach to how it approaches infrastructure, and how it ties it to the country's broader foreign and national security objectives.

It is unlikely that the United States will dramatically adjust its approach to infrastructure development in the coming years. However, it can and should do more with its existing

 <sup>&</sup>lt;sup>41</sup> GE Reports—Africa, "Why the US Export-Import Bank Matters to Africa," October 9, 2015, http://www.gereportsafrica.com/post/130794643472/why-the-us-export-import-bank-matters-to-africa.
<sup>42</sup> Export-Import Bank, "Ex-Im Bank Finances U.S. Exports to Help Rebuild Chile's Infrastructure," June 14, 2010, http://www.exim.gov/news/ex-im-bank-finances-us-exports-help-rebuild-chiles-infrastructure
<sup>43</sup> Peter Wonacott and Nicholas Bariyo, "In Zambia Election, the Big Issue Is China," *Wall Street Journal*, September 21, 2011, http://www.wsj.com/articles/SB10001424053111904194604576582093246107906.
<sup>44</sup> Christina Larson, "The Cracks in China's Shiny Buildings," Bloomberg, September 27, 2012, http://www.bloomberg.com/bw/articles/2012-09-27/the-cracks-in-chinas-shiny-buildings.

instruments. The United States must honestly assess the tradeoffs around policies promoting low-carbon and renewable energy, as well as opposition to projects like hydropower that bring elevated environmental, social, and governance (ESG) challenges. While there are strong and valid reasons for these policies, it does limit the ability of the United States to support infrastructure projects in the developing world. Congressional opposition to key agencies such as Export-Import and OPIC limits U.S. capabilities—this, at a time when the focus should on how to provide greater flexibility and empowerment to these agencies. It is also incumbent upon future administration's to articulate a coherent strategic approach for why the United States should support infrastructure development. Specifically, the United States should take a two-pronged approach targeting both U.S. government agencies and multilateral institutions.

#### International and Multilateral Recommendations

- **Create strategic partnerships for infrastructure development.** There are donors, such as Japan, that have continued to provide robust financing for infrastructure projects. The United States should seek to work together with these donors to leverage our strengths and maximize impact.
- Seek a special capital increase for the Asian Development Bank in partnership with Japan. ADB President Nakao has already laid out an accounting plan that will allow the ADB to increase its lending ability from its current range of \$15–\$16 billion per year to around \$22 billion per year. More can, and should, be done. The United States, in partnership with Japan, should seek a special capital increase to raise its total lending. As part of this, the ADB should undertake a top-to-bottom review of its lending practices, personnel policy, and operating norms.
- Launch a review of multilateral development bank (MDB) practices. The United States is a leading shareholder in the MDBs, and should ensure that internal processes and standards do not inhibit the timely approval of infrastructure projects.
- **Increase support for project preparation and capacity building.** The United States should look beyond simply providing infrastructure financing and provide critical regulatory reforms and capacity building. The United States, except for small projects, will likely not provide large amounts of direct financing (or financing guarantees) for infrastructure projects.
- Roll out World Bank Procurement Reform through large-scale training of developing country public officials. The World Bank has initiated a far-reaching reform of its procurement regulations that seeks to move away from low-bid and toward incorporating life-cycle costs. The sorts of training that TDA is conducting needs to be scaled in order to reach the tens of thousands of people we will need to train to create a tipping point.

#### **U.S. Government Recommendations**

- **Develop a long-term strategy for infrastructure development**. The United States maintains agencies, tools, and capacities that could be strategically integrated to support more effective global infrastructure development.
- **Provide long-term congressional authorizations for critical agencies**. In July 2015, Export-Import's congressional authorization lapsed (though it was recently renewed); OPIC has operated on a year-long authorization since 2008. Both agencies would benefit from long-term certainty and increased operational flexibility.
- **Provide greater support to specialized U.S. development agencies.** OPIC, USTDA, and MCC all provide a variety of direct or indirect support for infrastructure development; all of them could be strengthened to have a greater impact. This would mean growing the number of full-time employees at OPIC to give the ability to close more deals each year; provide USTDA with a larger budget to increase its resources available for project preparation; and continue to prioritize infrastructure projects as part of MCC compacts with an increased emphasis on coinvestment with local governments, MDBs, and private-sector sources.
- **Prioritize infrastructure support at the country level.** Developing countries often have strong infrastructure commitments in their national development plans, and the United States should incorporate infrastructure support into country-level development strategies in ways that complement domestic commitments and priorities.
- Examine existing initiatives for money that can support infrastructure development. A good example of this is Feed the Future, which already devotes money to support the rural feeder roads in order to provide access to market for small-holder farmers.

# About the Authors

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Earlier, Mr. Runde was director of the Office of Global Development Alliances at the U.S. Agency for International Development (USAID). He led the initiative by providing training, networks, staff, funds, and advice to establish and strengthen alliances, while personally consulting to 15 USAID missions in Latin America, the Middle East, and Africa. His efforts leveraged \$4.8 billion through 100 direct alliances and 300 others through training and technical assistance. Mr. Runde began his career in financial services at Alex. Brown & Sons, Inc., in Baltimore and worked for both CitiBank and BankBoston in Buenos Aires, Argentina. He received an M.P.P. from the Kennedy School of Government at Harvard University and holds a B.A., cum laude, from Dartmouth College.

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