

Private Participation
in Infrastructure (PPI)

2019

ANNUAL REPORT



THE WORLD BANK
IBRD • IDA

Acknowledgement & Disclaimer

This report was prepared by a team comprising Darwin Marcelo (Task Team Leader), Seong Ho Hong, Teshura Nair and Apala Bhattacharya, with design inputs by Pablo Armando Alfaro Chavez. The team is very grateful for the support and guidance received from Fatouma Toure Ibrahima (Manager of Global Infrastructure Programs and Analytics, IPG Group). The team is thankful to Helen Mary Martin (Senior PPP Specialist, IPG Group), Patrice Caporossi (Senior Infrastructure Finance Specialist, IPG Group) and Fernanda Ruiz-Nuñez (Senior Economist, IPG Group) for providing valuable comments which helped shape the report. Cover photo © Gwydion M. Williams/Creative Commons. This report describes Private Participation in Infrastructure (PPI) as indicated in the Private Participation in Infrastructure Database. The database records investment information for infrastructure projects in low- and middle-income countries globally. The PPI Database represents the best efforts of a research team to compile publicly available information, and should not be seen as a fully comprehensive resource. Some projects—particularly those involving local and small-scale operators—tend to be omitted because they are usually not reported by major news sources, databases, government websites, and other sources used by the PPI Projects database staff.

Table of Contents

Key Highlights	1
Executive Summary	2
1. Overview	4
2. Geographic Spread	8
3. Investment in IDA Countries	14
4. Sector Trends	16
5. Financing Trends	23
5.1 Development Finance Institution (DFI) Support	23
5.2 Financing Mix	25





2019 Key Highlights

- In 2019, private investment commitments¹ in energy; transport; information and communications technology (ICT) backbone; water and the newly included municipal solid waste (MSW) infrastructure in low- and middle-income countries totaled US\$96.7 billion across 409 projects in 62 countries. This represents a slight decline of three percent compared to 2018 levels.
- East Asia and the Pacific (EAP), mainly led by China, dominated global investments in infrastructure accounting for 39 percent of the total; however, the region's share of investments and total investment volume decreased. Latin America and the Caribbean (LAC) showed a significant increase in investment levels, offsetting a drop in Europe and Central Asia (ECA). Investment levels in South Asia remained largely constant from 2018.
- IDA (International Development Association) countries² recorded private investment of US\$8.7 billion across 29 projects in 18 countries, the third highest level in the last ten years.
- Transport continued to dominate as the largest PPI sector in 2019 continuing the trend from 2018, accounting for a half of global investment commitments this year. Energy and Water sector investments increased by 22 and five percent from last year respectively. Municipal solid waste was included as a sector for the first time and accounted for two percent of investment commitments in infrastructure for the year.
- Of the 150 electricity generation projects, 136 were in renewables, accounting for ninety-one percent of all new electricity generations projects. By investment volume, renewable energy accounted for 62 percent of electricity generation investments. In terms of capacity, 60 percent was in renewables. Solar continued to be the dominant technology for power generation.
- Of the investment amounts for which financing information was available³, private sources remained the largest share with 62 percent of investments. Public sources financed 13 percent compared to 17 percent in 2018, and development and export finance institutions (DEFIs)—which are both multilateral and bilateral—financed 25 percent. This compares to 19 percent in 2018.
- Of the investment amounts, 67 percent was debt-financed; 46 percent of this debt was raised from commercial providers, 20 percent from bilateral and 17 percent from multilateral providers. Overall, international sources financed 61 percent of the debt.

¹Private Participation in Infrastructure (PPI) as defined by the Private Participation in Infrastructure Database (<http://ppi.worldbank.org/methodology/ppi-methodology>).

²"IDA countries" refers to countries that are eligible for support from the IDA, the part of the World Bank that helps the world's poorest countries (<http://ida.worldbank.org/>).

³Financing information was available for 74 percent of investment commitments made in 2019, with investments totalling \$50.1 billion. Information was unavailable for all projects in China, including the megaprojects.

Executive Summary

Investment⁴ commitments in 2019 stood at US\$96.7 billion across 409 projects, marking a slight decline of three percent from 2018 levels. In addition to uncertainties raised by trade frictions and market volatility, the dip in 2019 investment levels can be explained by reduced energy investments, particularly in Indonesia, India, China and Turkey, all of which were among the top five investment destinations in 2018.

Private investment commitments occurred in 62 countries, which is the highest number in last decade. Belarus, Belize, Cabo Verde, Comoros, Cuba, Malawi, Paraguay, Uzbekistan and others recorded projects after a decade-long hiatus and St. Vincent and the Grenadines reported its first project ever.

Of the 409 projects recorded in 2019, 40 percent (160 projects) had a majority of their equity sponsored by international entities. Most international sponsors were from high-income countries with the exception of China. China's role as a sponsor of infrastructure projects abroad is noteworthy in 2019. US\$10.3 billion (19% percent of all projects with international sponsors) worth of projects in developing countries were sponsored by Chinese entities. This is mainly attributed to the Belt and Road Initiative (BRI), China's global development project. As the initiative enters its 5th year in 2019, BRI projects are present in more countries and sectors. For example, the largest electricity transmission project (Pakistan), port project (Nigeria), and railway project (Lao PDR) were sponsored by the Chinese entities in 2019.

EAP continues to dominate global investments, accounting for 39 percent of total PPI investments in 2019 although this represented a decreased investment commitment in absolute terms as well as in percentage terms compared to 2018. Among six regions, LAC is the only region with a significant increase in investments compared to 2018. ECA had a substantial fall in investments in 2019. Despite a small investment volume, 2019 saw more countries in ECA receiving investment in this region. For example, Belarus, Bosnia and Herzegovina, Kosovo, and Uzbekistan saw their first PPI transaction in the last five years.

Investment commitments in IDA countries in 2019 totalled US\$8.7 billion across 29 projects in 18 countries. Investment commitments in 2019 is the third highest level in the last ten years after 2012 and 2010. High levels of investment commitment in IDA countries in 2019 reaffirm the importance of cross-border sponsors. All IDA projects above US\$500 million are sponsored by international entities.

⁴“Investment” refers to private investment commitments at the time of financial close in energy, transport, water and ICT-backbone projects serving the public in low- and middle-income countries, including natural-gas transmission and distribution, but excluding oil and gas extraction. ICT backbone infrastructure includes fiber-optic cables, mobile towers and other hard assets, with an active government component, as well as municipal solid waste inclusive of collection and transport services, treatment and disposal plants and integrated MSW projects.

Renewable energy continued to play a significant role in new energy generation projects even though it was slightly lower compared to 2018. MENA and ECA were the regions leading renewable deployment while EAP has the lowest renewable rate⁵ of 13 percent. The low rate in EAP is mainly due to conventional power projects in Vietnam and Thailand. Meanwhile, the country with the largest renewable portfolio is Mexico. Since the introduction of a renewable energy policy in 2014, Mexico has been one of Latin America's largest renewable energy market for private investors.

The PPI database has begun collecting data on municipal solid waste infrastructure in 2019. Total of US\$4.7 billion was invested across 64 projects in MSW, which is about five percent of total PPI investment. The majority of the investment commitments (US\$3.4 billion) were channelled to treatment and disposal projects. These investment transactions will add capacity of 46.5 million tons per year of solid waste processing in the developing countries.

With respect to the financing provided, approximately 62 percent came from private sources, 25 percent came from DEFI sources, and 13 percent came from public sources. As was the case in 2018, private sources remained the largest share while the share of DEFI increased by six percent compared to 2018. In 2019, 67 percent was debt-financed; 46 percent of the total debt was raised from commercial providers, 20 percent from bilateral and 17 percent from multilateral providers.

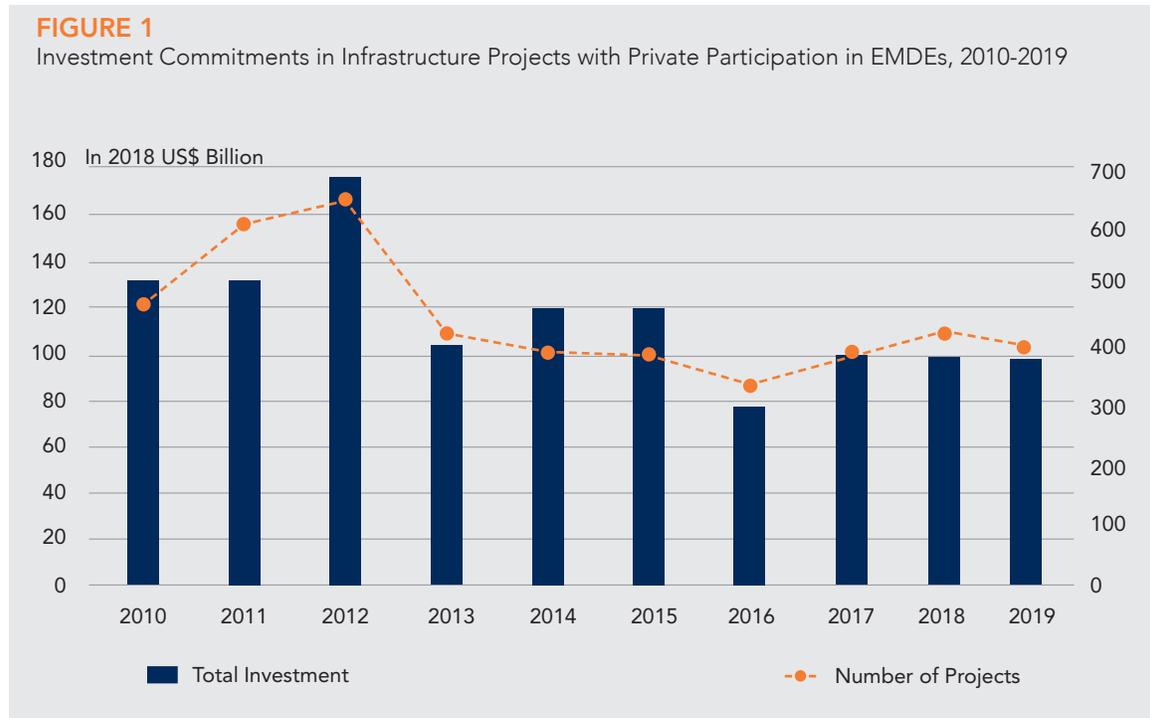
DEFIs⁶ played a much larger role in financing in 2019 than in 2018, accounting for 61 percent of international debt. While macroeconomic uncertainties from trade tensions, economic stress in some developing regions, and the continued downward revisions of global growth outlook may have had an impact on commercial and local financial institutions, DEFI lending patterns seem less influenced by these trends as most of DEFIs pursue their development mandates.

⁵Renewable rate refers to the share of renewable energy capacity in the total newly-added capacity.

⁶DEFIs for the purposes of this report is used to define multilateral institutions and bilateral agencies with a development mandate, as well as export credit agencies with a mandate to support domestic businesses in pursuing investments abroad.

1. Overview

PPI investment in 2019 totalled US\$96.7 billion across 409 projects, a decrease of 3 percent over 2018 investment levels of US\$99.7 billion⁷. The total investment recorded for 2019 reported seven percent below the previous five-year average of US\$103.5 billion but continued the recovery from the ten-year low of US\$76.8 billion in 2016.



While investment commitments were expected to surpass 2018 investment levels, a damper H2 investment climate led to overall lower 2019 investment levels. There was also a decrease in the number of projects from 428 projects in 2018 to 409 projects in 2019, a four percent decrease, but the number of projects in 2019 were higher compared to 2017 and 2016 with 386 and 353 projects, respectively. PPI projects in 2019 saw a six and 16 percent rise compared to projects in 2017 and 2016, respectively.

The decrease in investment levels this year can be attributed to a dampened investment climate especially apparent in Indonesia, India, China, Mexico and South Africa. South Africa decreased to two projects after a record high of 21 projects in 2018. Projects also decreased in Indonesia from 12 projects in 2018 down to two with a US\$6.5 billion drop in investment levels. In India, projects nearly halved with 63 projects in 2018 and 34 projects in 2019, though investment levels only saw a US\$3.7 billion dip. This can be attributed to the decreased number of road projects which peaked in 2018.

⁷The inclusion of municipal solid waste as a sector in the PPI database from 2019 results in several figures being higher than the ones reported in the 2018 PPI annual report.

While the number of projects in China increased from 119 last year to 142 this year, investment levels saw a US\$6.4 billion decrease. Conversely, Brazil continued its trend of increasing the number of projects outperforming 2018 investment levels of US\$6.1 billion to 2019 levels of US\$18.6 billion. While this includes a mega-project of US\$8.6 billion divestiture of Petrobras' natural gas transmission, two new mega-projects also reached financial closure in the second half of the year as well.

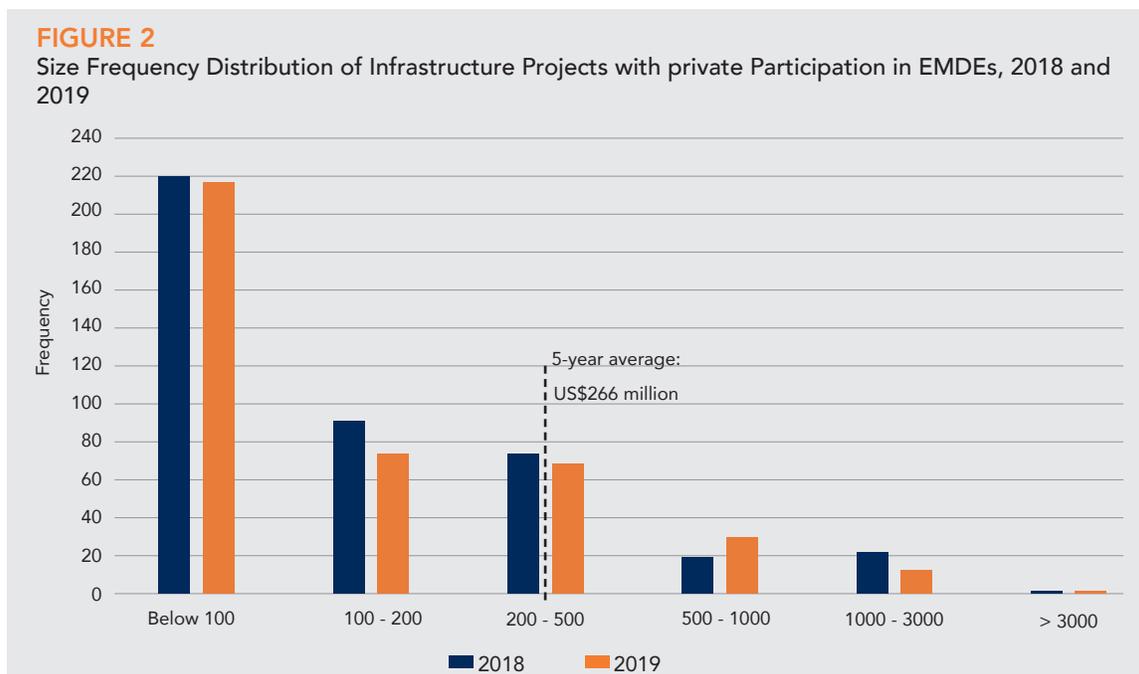
2019 saw investments in 62 countries which rose from the number of countries with investment commitments in 2018 (46 countries), and was the highest number of countries with private sector investment commitments in the decade. Countries such as Belarus, Belize, Cabo Verde, Comoros, Cuba, Malawi, Sudan, and Uzbekistan which hadn't posted commitments over the last decade, saw a return in investment in 2019. St. Vincent and the Grenadines also reported its first investment commitment in 2019.

The average (mean) project size in 2019 is higher than the average project size in 2018 (Table 1), while the median project size — US\$92 million in 2019 versus \$96 million in 2018 is lower. The slight positive skew in mean can be reflected by the higher value mega project in 2019 compared to 2018. On average, over the five-year period, the median size of projects has also decreased due to the inclusion on municipal solid waste as a new sector from this year whose project sizes are smaller in nature.

TABLE 1. FREQUENCY DISTRIBUTION OF PROJECT SIZES OVER THE PREVIOUS FIVE-YEAR PERIOD AND 2019				
Year	No. of Projects	Mean	Median	Maximum (2018 US\$ millions)
2014	389	324	80	11,146
2015	385	318	77	37,702
2016	353	229	71	5,430
2017	386	261	76	7,050
2018	428	232	96	3,804
2019	409	238	92	8,637

Investments in small projects (< US\$100 million) saw a small increase from 51 percent in 2018 compared to 53 percent in 2019. The share of small projects in 2019 has increased compared to previous numbers in the PPI reports due to the inclusion of municipal solid waste as a new sector. The share of medium-sized projects (US\$100- 500 million) fell from 39 percent in 2018 to 35 percent in 2019 (Figure 2). Investment commitments in larger projects in the US\$500 to 1,000 million range saw a rise in 2019 with an eight percent share up from four percent in 2018. The largest project in 2019 was US\$8.6 billion, compared to US\$3.8 billion in 2018 and the previous five-year average of US\$13 billion (Table 1).

Overall, 2019 saw a relative decrease in greenfield projects, which accounted for 73 percent of all PPI projects, compared to the five-year average of 76 percent and the 2018 share of 81 percent. The share of brownfield investments also grew from 13 percent in 2018 to 18 percent in 2019. Greenfield transport investments outperformed energy projects with greenfield investment in 2019 with a 46 percent share compared to 44 percent. Historically, energy projects with greenfield investments hold a larger share. The transport sector also outperformed in brownfield investments with an 86 percent share.



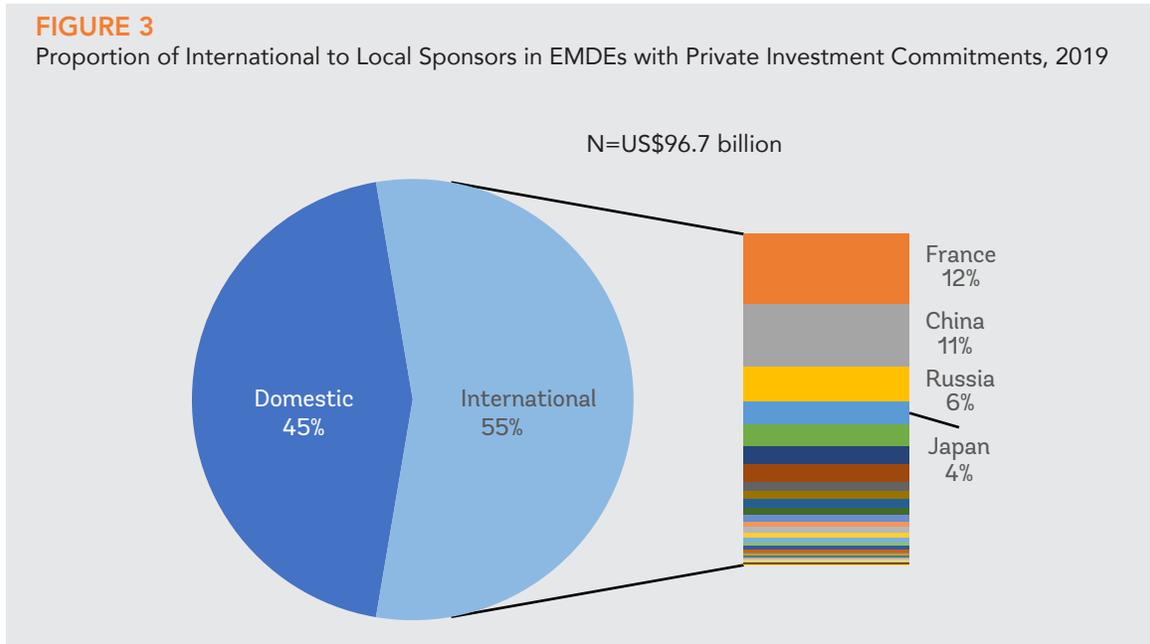
Contrary to 2018, the ratio of brownfield to greenfield projects was lowest in ECA with 44 greenfield projects and only 6 brownfield projects. EAP, driven by China, saw a rise in the number of brownfield projects especially in the latter half of the year. China continued to buck the global trend with the majority of greenfield investments in road transport projects instead of energy. This was followed closely by the water and sewerage sector with significant investment into water treatment plants. In 2019, 31 transactions were recorded as management contracts and there were only four divestitures.

DOMESTIC VERSUS INTERNATIONAL SPONSORS

Of the 409 projects recorded in 2019, about 40 percent (160 projects) had a majority of their stakes sponsored by international entities. International sponsors had a focus on energy with 115 projects among 160 in the energy sector. In terms of investment volume, 55 percent of projects were sponsored by international entities. (Figure 3)

Regions with the largest number of internationally sponsored projects are LAC and ECA. In Latin America, Spain and France are the main countries of origins while, in ECA, Russia and China are major sponsor countries. Most of the international sponsors were from high-income countries with the exception of China. In 2019, China's role as a sponsor of infrastructure projects abroad is noteworthy. Projects of US\$10.1 billion worth were sponsored by Chinese entities in developing countries. This is mainly attributed to the Belt and Road Initiative (BRI), China's global development project. As the ini-

tiative enters its 5th year in 2019, BRI projects are present in more countries and sectors. For example, the largest electricity transmission project (Pakistan), port project (Nigeria), and railway project (Lao PDR) of the year were sponsored by the Chinese entities.



The high number of domestically sponsored projects (249) can be explained by China. In China, there were 142 projects in 2019, and almost all of them were sponsored by domestic entities. Other countries with a significant number of projects sponsored by domestic entities include Brazil and India, which are relatively more mature markets, in terms of their PPP implementation record.

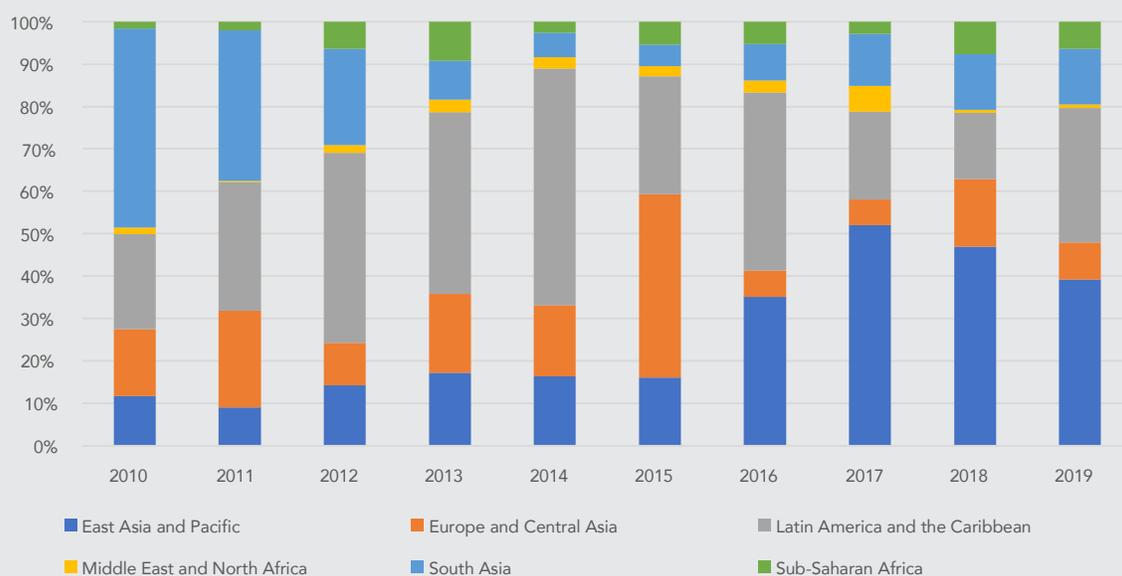
2. Geographic Spread

EAP continues to dominate global investments, accounting for 39 percent of total PPI investments in 2019 even though this represented a decreased investment commitment in absolute terms as well as in percentage terms. Among six regions, LAC is the only region with a significant increase in investments compared to 2018, causing the share of LAC to increase to 32 percent in 2019 from 16 percent in 2018. Investments in SAR, which has been showing signs of recovery since 2017, stayed at a similar level to 2017 and 2018. SSA and MENA did not see a notable change from 2018 while ECA had a substantial fall in investments in 2019. (Figure 4)

The five countries with the highest levels of investment in 2019 were: China, with US\$26.3 billion across 142 projects; Brazil, with US\$18.6 billion across 33 projects; India, with US\$7.6 billion across 34 projects; Vietnam, with US\$4.5 billion across 12 projects; and Russia, with US\$4.1 billion across 13 projects. In 2019, these five countries together attracted US\$61.1 billion and captured 63 percent of global PPI investment.

FIGURE 4

Regional Share of Investment Commitments in Infrastructure Projects with Private Participation in EMDEs, 2010–2019



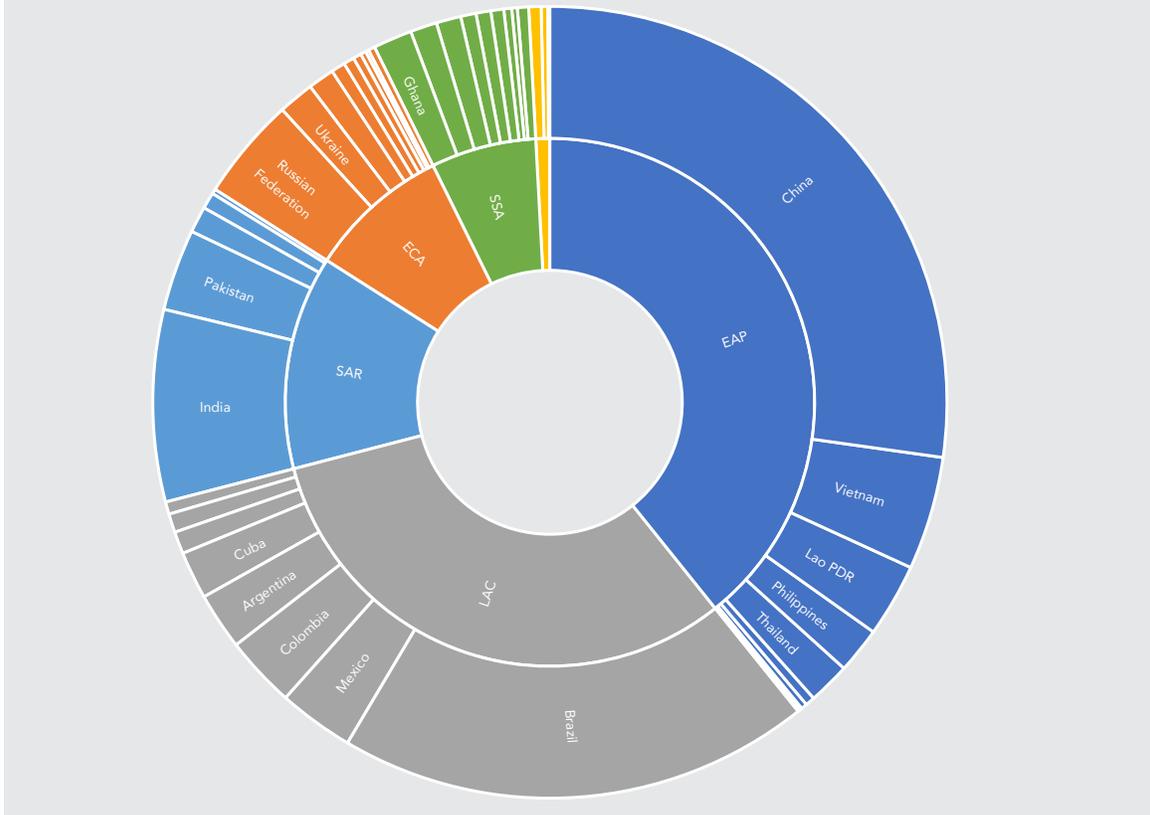
EAST ASIA AND PACIFIC (EAP)

In 2019, EAP received the highest level of PPI investment among all region at US\$38 billion, accounting for 39 percent of the global total (Figure 5). This was led mainly by China which accounted for 69 percent of the regional investment. Historically, while China has consistently dominated investments in the region, it has recently increased its share even as the level of investments decrease due to the fall in investments in other countries in the region. In 2017, China's share of regional investment was as low as 39 percent which increased to 70 percent in 2018, before a slight drop in 2019 to 69 percent. Countries like Indonesia, Philippines, Malaysia and Thailand historically had higher shares of regional investment than the current trend. While Philippines has rebounded investment levels in 2019 after

a historic low last year; Indonesia, Malaysia and Thailand have reduced investment levels. Vietnam, bucking the regional trend has increased its share of regional investment every year for the past five years and currently holds 12 percent of the regional share.

FIGURE 5

Investment Commitments in Infrastructure Projects with Private Participation In EMDEs, by Region and Country, 2019



In **China**, private investment commitments have been increasing at substantial rate since 2016; it surpassed US\$10 billion for the first time in 2016, reached US\$20 billion in 2017, and recorded the highest at US\$32.7 billion in 2018. However, this growth trend is not continued in 2019 as it recorded US\$26.3 billion. Similar to 2018, China’s investment commitment in 2019 is highly concentrated in the transport sector, comprising 75 percent of China’s total investment. This can be explained by the Chinese government’s continued effort to facilitate the process for municipal officials to raise funds for the construction of highways and railways. Meanwhile, 2019 saw only one energy project recorded in China. The data from China National Renewable Energy Center suggests that majority of installations in 2019 are related to distributed PV projects⁸, instead of utility-scale projects. This can be attributed to the scrapping of China’s national policy to support energy projects in the country in 2018.

Vietnam had a remarkable year with the highest private investment commitments (US\$4.5 billion across 12 projects) in the last 10 years. Vietnam saw investment commitments in various subsectors

⁸Osborne, Mark. April 18, 2019. “China’s solar installs plummet 46% to 5.2GW in Q1 2019 – AECEA.” PVTech. <https://www.pv-tech.org/news/chinas-solar-installs-plummet-46-to-5.2gw-in-q1-2019-aecea>

from electricity generation, roads to water treatment. The largest project in Vietnam was the 1,320 MW Coal power plant at US\$2.7 billion. Other than the coal project, wind was the most preferred technology for power generation in Vietnam, accounting for seven projects out of nine power generation projects. This trend is expected to continue as the Vietnamese government will provide several incentives to foreign investors in wind power projects. The incentives will include full ownership, free transferability of equity, lower rates of income tax, exemption from or lower rates of property taxes and levies and customs duty relief on equipment import.⁹

Indonesia, a previously consistent destination for PPI investments in EAP as well as one of the top-five PPI destinations in 2018, had only US\$372 million of investment commitments in 2019. There were a few factors that weakened the outlook for the project pipeline. The general election was held in April and the projects in the pipeline were put on hold. Also, Indonesia announced a delay of the planned electricity projects in the fourth quarter of 2018.¹⁰ It was as part of the government's effort to cut imports as the majority of the raw materials for new power plants are imported. The announcement was made after the rupiah hit the lowest exchange rate in 20 years. Still, the PPI investment in Indonesia is expected to bounce back as there is a long-term development agenda to improve infrastructure, which will be maintained under the current government.

Recovering from historically low level of investment in the last year, the **Philippines** returned to 2017 investment levels in 2019. The rebound can be attributed to policy changes within the administration which included the introduction of a new law reducing the red tape in permit grants in 2018 and increasing the frequency at which the planning committee meets to implement the country's 'Build, Build, Build' program of which a quarter of the projects will be implemented with private sector participation¹¹.

Solomon Island has its first large-scale infrastructure to be developed as a PPP. The Tina River Hydro-power Development Project is supported by several international multilateral funding agencies such as the World Bank, ADB, and Green Climate fund and the project will displace the majority of nation's diesel-powered generation.

Other countries with investment commitments include **Cambodia, Lao PDR, Malaysia, Mongolia, Philippines, and Thailand.**

LATIN AMERICA AND THE CARIBBEAN (LAC)

With US\$30.7 billion, LAC was the region with the second-highest investment level in 2019. Investment commitments in LAC has almost doubled from 2018, driven largely by a surge in Brazil. Brazil accounted for two third of the regional investment at US\$18.6 billion.

⁹Maski, Shri. December 13, 2019. "Changes in Vietnam's model wind PPA could put investment in new projects at risk." Renewable Energy World. <https://www.renewableenergyworld.com/2019/12/13/changes-in-vietnams-model-wind-ppa-could-put-investment-in-new-projects-at-risk/#gref>

¹⁰Sulaiman, Stefan Reinard. September 25, 2018. "Only 4.6 GW of electricity projects can be delayed: Official." JakartaPost. www.thejakartapost.com/news/2018/09/25/only-4-6-gw-of-electricity-projects-can-be-delayed-official.html

¹¹The Philippines, a country with dreadful traffic, may start to unclog. The Economist. <https://www.economist.com/asia/2020/01/25/the-philippines-a-country-with-dreadful-traffic-may-start-to-unclog>

Investments in **Brazil** are across different subsectors from solid waste collection, electricity generation, electricity transmission, roads, natural gas distribution to a sewerage treatment plant. The large investment commitments in Brazil can be attributed to one single project- the privatization transaction by the state oil group Petrobras of its network of gas pipelines to French Engie and Canadian fund CDPQ for US\$8.6 billion. A series of similar privatization transactions is expected in Brazil, under the new president, as the country has launched large-scale privatization and concession projects with the aim of reducing the country's public debt.¹² According to Salim Mattar, Brazil's privatizations secretary, Brazil hopes to sell assets worth US\$36 billion in 2020.

Mexico, with US\$3.0 billion across 19 projects, was the second-largest investment destination in the region even with a 37 percent decrease in investment commitments from 2018 and the lowest reported investment commitments in the decade. This can be attributed to the change in administration following elections in 2018. Investor uncertainty and a falling peso contributed to the further decrease in private investment in infrastructure projects. Nevertheless, investment is expected to pick up next year with the launch of a US\$45 billion infrastructure plan underwritten by the private sector as well as the launch of several infrastructure projects to boost economic growth.¹³ Mexico has added 2.6GW of the power generation capacity, all of which uses either wind or solar technology. This is a result of a strong renewable policy in Mexico. Clean-energy certificates were introduced in a 2014 overhaul of the country's electricity laws as an incentive to build more renewable capacity, especially wind and solar power, and raise the country's use of clean energy from 20 to 35 percent by 2024. Since then, Mexico has been one of the largest renewable energy markets for private investors in LAC.

St. Vincent and the Grenadines, a southern Caribbean nation, recorded first private investment transaction in the database in 2019. The planned 10 MW geothermal power plant has the potential to serve about 60 percent of the electricity needs of St. Vincent's residents and businesses. In **Cuba**, which also had its first PPI project in decade, a US\$ 1.9 billion contract for the restoration and modernization of the railway infrastructure has been signed with Russian Railways.

Other countries with PPI transactions in the region were **Argentina, Belize, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Paraguay** and **Peru**.

SOUTH ASIA REGION (SAR)

SAR attracted US\$12.7 billion in investments in 2019, marking a decrease of three percent over 2018 levels but an increase of 40 percent over the five-year average.

India, at investment commitments totalling US\$7.6 billion, continued to be amongst the top-five investment destinations even though this represents a 33 percent drop compared to the 2018 value. The majority of investments in India were in the transport sector accounting for 88 percent of all investment commitments in the country. The road subsector has been the major driver for PPI in India since 2018 thanks to the current road ministry's sustained efforts to attract more private investment.

¹²Bautzer, T. (2019, January 29). Brazil govt aims to sell at least \$20 billion in assets this year. Reuters. <https://www.reuters.com/article/us-brazil-privatization/brazil-govt-aims-to-sell-at-least-20-billion-in-assets-this-year-idUSKCN1PN1O4>

¹³Angulo, Sharay. December 21, 2019. "Battered Mexican construction sector hopes to exit slump in 2020." Reuters. <https://www.reuters.com/article/us-mexico-economy-construction/battered-mexican-construction-sector-hopes-to-exit-slump-in-2020-idUSKBN1YO22A>

However, the road subsector has not maintained its growth trend and recorded only US\$3.5 billion compared to US\$6.4 billion in 2018. This is due to the increasing unsustainable level of debt that the country's National Highway Authority has taken on in the recent years. The Government is instead looking into changing India's road construction policy to incentivize private sector participants to take on road projects under an improved build-operate-transfer (BOT) model.¹⁴ The Bangalore Kempegowda International Airport Expansion is the largest project in India in 2019, and is being implemented in response to increasing passenger volume at the airport. US\$1.9 billion has been committed for the construction of Terminal 2, an additional runway and other related facilities at the airport.

In 2019, **Pakistan** saw a 172 percent increase in investment levels over 2018 and a 27 percent increase from the five-year average. Pakistan's US\$3.2 billion investment commitments in 2019 can be summarized by one large transmission project¹⁵ and a series of wind projects. Over the past few years, Pakistan has added extra generation to counter blackouts even though most of newly added generation has been primarily fossil fuel-based. However, the new Pakistani government introduced an Alternative Renewable Energy Development Policy in effort to increase the share of renewable energy in total power generation.¹⁶ Hence, more renewable energy projects sponsored by private sectors are expected to come online. With the new renewable policy, the government will abolish upfront tariffs and replace it with competitive bidding to attract investors to enhance the share of renewable energy to 30 percent in the energy mix.

Other countries with PPI transactions in the region were **Bangladesh, Afghanistan and Nepal**.

EUROPE AND CENTRAL ASIA (ECA)

ECA, with US\$8.4 billion, has seen a sharp drop from 2018 levels of US\$15.9 billion as well as the five-year average of US\$19.8 billion. This is mainly due to a significant decrease in **Turkey**.

In 2018, Turkey alone had US\$8.0 billion worth of investments, which placed itself in the top five PPI countries in 2018. In 2019, however, Turkey dropped to only US\$1.0 billion of private investment commitments in infrastructure. This fall can be partly explained by the weak macroeconomic environment; it has recorded two consecutive quarters of falling economic growth, which has led Turkey to suspend several investment projects.¹⁷ The depreciation of the lira also played a role. Debt financing for infrastructure development in Turkey is mostly denominated in hard currencies and the depreciation of the lira has a negative impact on infrastructure investment, by creating a significant downside risk for the infrastructure sector.

Uzbekistan announced the winner in the country's first competitive tender as well as the financial closure of a solar power public-private partnership project in 2019. This is in line with the Uzbek plan to build around 25 solar power plants in the next ten years. Meanwhile, Uzbekistan has adopted its first law regulating public-private partnerships in 2019. A series of similar PPP transactions are expected in

¹⁴Saluja, Nishta. September 10, 2019. "New norms likely for BOT road projects to lure private investors." Economic Times. <https://economictimes.indiatimes.com/news/economy/infrastructure/new-norms-likely-for-bot-road-projects-to-lure-private-investors/articleshow/71070897.cms?from=mdr>

¹⁵The Matiari-Lahore Transmission Line Project is notable as it is the first power transmission line in Pakistan financed through the private sector and has attracted foreign investment.

¹⁶"PTI govt sees \$40b investment potential in clean energy" Tribune

coming years as this initial PPP transaction may set a precedent for future private sector participation in the country and sends a positive message to the global investment market.

Despite a small investment volume, 2019 saw more countries receiving investment in this region. For example, **Belarus, Bosnia and Herzegovina, Kosovo**, saw a return in PPI transactions after five years. Other countries with PPI transactions in the region were **Serbia, Armenia, Georgia, Kazakhstan, and Ukraine**.

SUB-SAHARAN AFRICA (SSA)

SSA received US\$6.2 billion across 23 projects, marking a 19 percent decrease in investment levels from 2018. However, the 2019 value is 28 percent higher than the five-year average at US\$4.9 billion. **Ghana** and **Nigeria** are two major investment destinations in the region with US\$1.5 billion and US\$1.1 billion respectively.

South Africa, usually a popular PPI investment destination, had only minimal investment commitment at US\$972 million in 2019. It is the first time since 2014 that total investment commitments have fallen below US\$1 billion. This significant decrease can partly attributed to a financial and operational crisis involving the national power agency, Eskom. Eskom's semi-annual results, announced at the end of 2018, highlighted 89-percent lower profitability than what had been recorded in the previous year, mainly due to its unsustainable debt level.¹⁸ Subsequently, market anxiety caused by reports that the government may ask independent power producers to renegotiate the tariffs of power-purchase agreements (PPAs) awarded in the first two rounds of its renewable-energy program negatively impacted prospective independent power producers.¹⁹ However, in February 2019, the South African government announced plans to unbundle Eskom into three separate entities responsible for power generation, transmission and distribution. Hence, a series of privatization transactions in South Africa is anticipated in the coming years.

Nigeria had one project, namely, the Lekki Deep Sea Port Phase I. Lekki Port, with 1200 TEU capacity, will become one of the largest deep-water ports in West Africa, playing a pivotal role in the region. It will also support the service of the Belt and Road Initiative in Nigeria.

Sudan, Chad, Comoros, Mauritania, Cabo Verde and **Malawi** reported their first PPI project in the last five years. Other countries with PPI transactions in the region include **Kenya, Cote d'Ivoire** and six others.

MIDDLE EAST AND NORTH AFRICA (MENA)

At US\$826 million, the 2019 investment levels in MENA increased to US\$160 million from its US\$666 million level in 2018. However, it is still significantly low compared to the five-year average at US\$3 billion. Four countries received investment commitments in the region: **Egypt**, with US\$485 million in two projects, **Morocco**, with US\$257 million, **Jordan**, with US\$74 million for a solar power plant, and **Tunisia**, with a US\$10 million solar project.

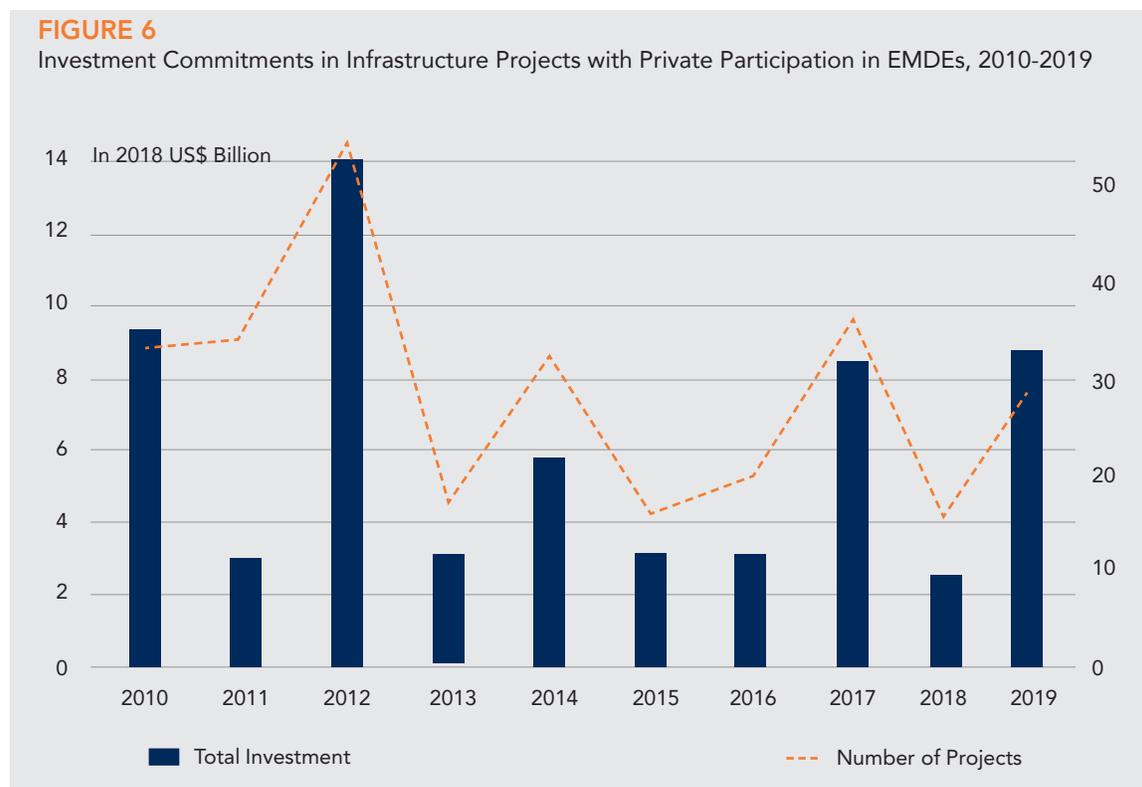
¹⁷"ASIAN INFRASTRUCTURE FINANCE 2019" The Economist Intelligence Unit. <https://www.eiu.com/graphics/marketing/pdf/Asian-Infrastructure-Finance-2019.pdf>

¹⁸Mamai, P. December 12, 2018. "Eskom's debt is draining South African growth." Financial Times. <https://www.ft.com/content/94e9eb5a-fe0c-11e8-ac00-57a2a826423e>

¹⁹Bellini, E. February 20, 2019. "A specter is haunting South Africa, renegotiation of PPAs signed between 2011 and 2012." PV Magazine. <https://www.pv-magazine.com/2019/02/20/a-specter-is-haunting-south-africa-renegotiation-of-ppas-signed-between-2011-and-2012/>.

3. Investment in IDA Countries

Investment commitments in IDA countries²⁰ in 2019 totalled US\$8.7 billion across 29 projects in 18 countries. Investment commitments in 2019 is the third highest level in the last ten years after 2012 and 2010 (Figure 6).



The sizable investments in IDA countries in 2019 were led by high investment levels in Lao PDR and Ghana. Lao PDR has an investment commitment of US\$2.9 billion over two projects. Ghana had five projects across port, roads, water, and electricity subsectors, totalling US\$1.0 billion.

The high level of investment commitment in IDA countries in 2019 reaffirm the importance of cross-border sponsors. All IDA projects that are above US\$500 million are sponsored by international entities. For example, the largest project in Lao PDR was developed by China under the Belt and Road initiative framework, while Ghana’s power distribution contract and Sudan’s port terminal concession were sponsored by entities from the Philippines. Finally, a hydropower plant in Nepal was sponsored by a South Korean company. These four projects together received US\$4.7 billion, surpassing the 2018 IDA total.

²⁰As currently defined by the World Bank for fiscal year 2020, IDA countries are those with gross net income (GNI) per capita below the threshold of US\$1,175. For this review, we focus on 59 countries that are eligible for IDA assistance and exclude blend countries. These 59 countries account for 3.5 percent of the gross domestic product (GDP) and 17 percent of the population of emerging markets and developing economies (EMDEs)

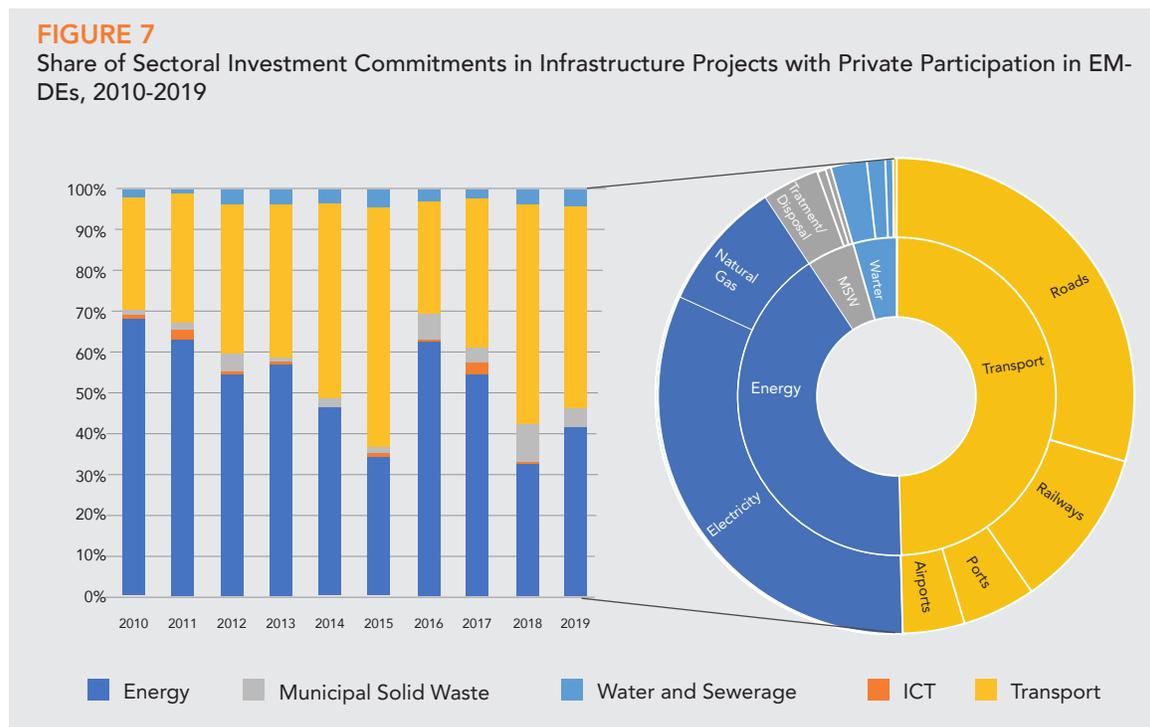
Bangladesh has managed to sustain PPI investment commitments every year since 2005. Comoros, Malawi, Solomon island and Sudan had their first PPI investments in the last ten years.

TABLE 2: INVESTMENT COMMITMENTS AND NUMBER OF INFRASTRUCTURE PROJECTS WITH PRIVATE PARTICIPATION IN IDA COUNTRIES IN 2019?		
Country	Total Investment (US\$ million)	Number of Projects
Lao PDR	2,899	2
Ghana	1,533	2
Bangladesh	1,037	5
Nepal	647	1
Sudan	604	1
Cote d'Ivoire	582	2
Mauritania	310	1
Solomon Islands	233	1
Kosovo	212	2
Afghanistan	190	3
Uganda	87	1
Cambodia	75	1
Comoros	74	1
Chad	70	1
Malawi	67	1
Mozambique	56	1
Senegal	54	2
Tanzania	9	1
IDA 2019	US\$8,740	29
IDA 2018	US\$2,522	15
IDA (Last five-year Average)	US\$4,615	23.8

4. Sector Trends

TRANSPORT:

In 2019, the transport sector continued to outpace the energy sector, attracting US\$47.8 billion across 123 projects. This accounts for a half of global 2019 PPI investments. The energy sector received US\$40.1 billion across 169 projects, accounting for 41 percent of investment commitment in 2019. MSW received US\$4.7 billion across 64 projects and the water sector attracted US\$4.0 billion over 51



projects, while ICT received US\$174 million in three projects (Figure 7).

Transport-sector investment commitments totalled US\$47.8 billion across 123 projects in 2019, which is an 11 percent decrease from 2018 levels but is nearly equal to the five-year average. In terms of the number of projects, 2019 saw investments in 122 projects which was the second highest in the past ten years. Within the transport sector, China received the largest investment commitments (US\$28.4 billion), followed by India (US\$6.7 billion) and Russia (US\$3.4 billion). Within transport, road investments dominated, accounting for more than a half (59 percent) of the sector's investments (US\$28.4 billion across 90 projects). Of the remaining 33 transport projects, seven were airport projects worth US\$3.9 billion, and nine were railroad investments totalling US\$10.6 billion. Finally, there were 17 port projects worth US\$4.9 billion.

Similar to 2018, a bulk of the investment in **roads** took place in China, with US\$14.8 billion invested across 52 projects. This was a result of the Chinese government's efforts to expedite infrastructure projects as its economy showed signs of cooling.

2019 saw **port** investments worth US\$4.9 billion across 15 countries. This was an increase of 33 percent over 2018 levels of US\$3.7 billion and 42 percent over the five-year average. The region with the highest private investment for ports is SSA, with US\$2.3 billion. All of the port projects in SSA are sponsored by foreign entities such as China, the Philippines, Singapore, France, and Switzerland in order of investment volume. The largest port project is a Lekki Deep Sea Port in Nigeria, which had a total investment commitment of US\$1.1 billion. This project is set to become one of the largest deep-water ports in West Africa, and a part of the Belt and Road Initiative in Nigeria.

2019 saw a significant increase in railways investment compared to 2018. In 2019, there were eight **railway** projects with a total of US\$10.6 billion of investment commitments. Similar to the port subsector, the largest project in the railway subsector is sponsored by a Chinese company. The US\$5.7 billion China-Laos Railway project, according to its sponsor, China Railway Group, is a landmark project featuring regional interconnectivity under the Belt and Road Initiative.

Finally, the **airport** subsector had seven projects in India, Russia, and the Philippines, totalling US\$3.9 billion.

ENERGY:

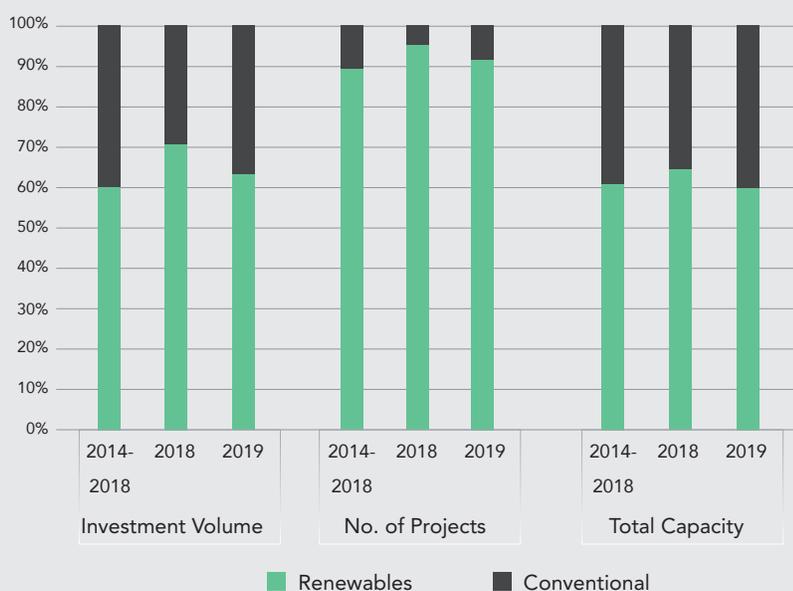
At US\$40.1 billion across 169 projects, investment in the energy sector in 2019 saw a 22 percent increase over 2018 levels of US\$32.8 billion but a 14 percent decrease over the five-year average of US\$46.6 billion. 2019 saw the lowest number of energy projects recorded in past decade. The large investment volume in 2019 despite the number of projects being low can be explained by the US\$8.6 billion Petrobras' gas network divestiture which alone accounts for 40 percent of energy investment in 2019.

Excluding the megaproject in Brazil, investment commitments in the energy sector are the lowest in the past five years. This decline can be attributed to historically low energy investments in China. Since 2018, investment commitment in the energy sector has seen a sharp drop in China. This is mainly due to a cessation of subsidies and government support for solar projects and this trend continued in 2019.

Despite low sectoral investment commitments, renewable energy continued to play a significant role in new energy generation projects. Of the 150 electricity generation projects, 136 were in renewables. 91 percent of all new electricity generations projects use renewable-energy sources as compared to 89 percent in the preceding five years. In terms of investment volume, almost 62 percent of electricity-generation investments were in renewables as compared to 59 percent in the past five years. However, 60 percent of the newly added capacity was from renewable-energy sources compared to 61 percent in the past five years (Figure 8).

FIGURE 8

Share of Sectoral Investment Commitments in Infrastructure Projects with Private Participation in EM-DEs, 2010-2019



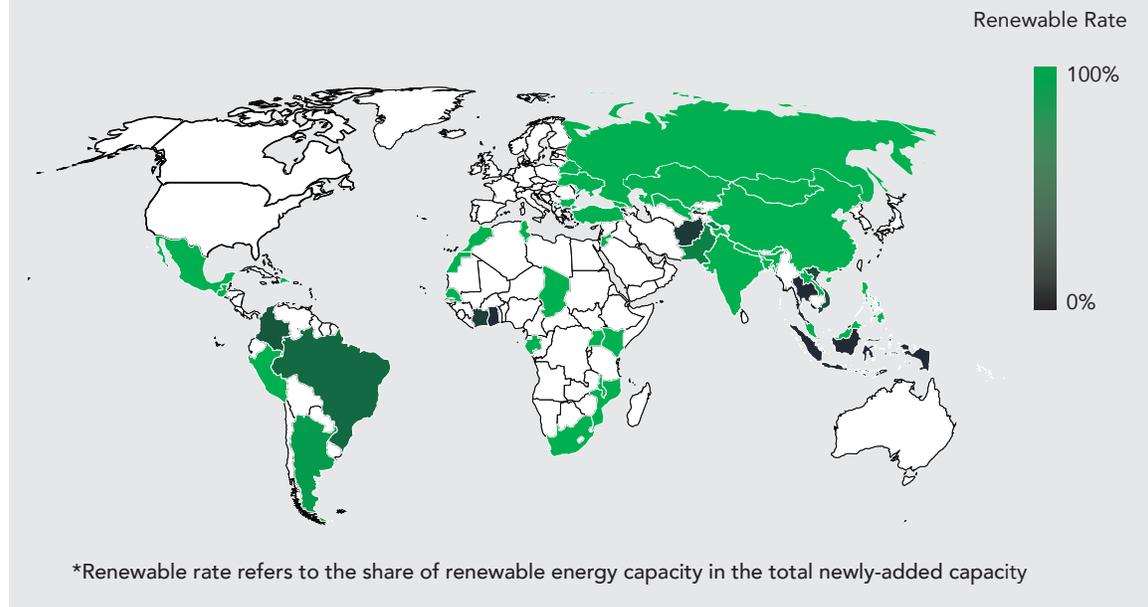
MENA and ECA were the regions leading renewable deployment. In MENA, US\$571 million was invested in renewable power plants while there was no investment in conventional powerplants. In ECA, US\$3.7 billion was committed in renewable power plants while only US\$321 million was channelled to conventional power plants, accounting for 92 percent of investment commitment in renewables. On the contrary, EAP has the lowest renewable rate of 13 percent, with only US\$ 1.1 billion was channelled to renewable energy power plants while US\$4.6 billion was committed to conventional power plants. The low rate in EAP is mainly due to the sizable coal-project in Vietnam and a combined-cycle power plant in Thailand. This trend is expected to continue in this energy-hungry region as coal is the cornerstone of its energy supply in Vietnam and, under current plans, the fleet of coal-fired power plants will soon triple despite a strong renewable program in place.²¹

²¹“Vietnam grapples with an unexpected surge in solar power” The Economist. <https://www.economist.com/asia/2020/01/25/vietnam-grapples-with-an-unexpected-surge-in-solar-power>

At a country level, with the exception of Afghanistan, Armenia, Brazil, Côte d'Ivoire, El Salvador, Ghana, Indonesia, Thailand, and Vietnam, most of the private investment in energy were in renewable-energy projects (Figure 9).

FIGURE 9

Rate of Renewable Energy Sources Used in Newly-Added Electricity Generation in EMDEs with Private Investment Commitment

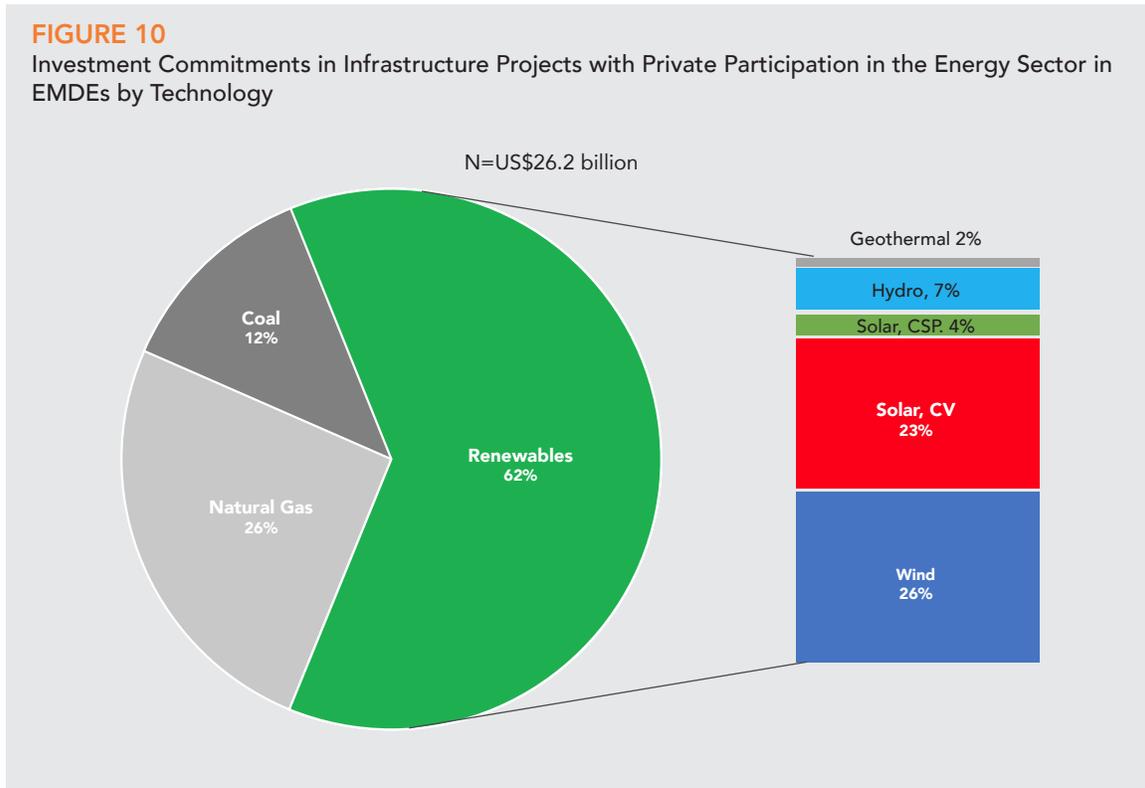


In terms of the number of projects, the most popular technology for electricity generation is solar PV—with 67 projects accounting for 45 percent of all power projects—followed by wind, with 55 projects. The country with the largest Solar PV portfolio is Mexico in 2019 at US\$2.1 billion across 15 projects. Mexico has been Latin America's one of the largest renewable energy markets for private investors since the introduction of clean-energy certificates in 2014.

In terms of capacity, natural gas added the most (6.5 GW) to EMDEs. This represents about 32 percent of all new capacity added using private investment in 2019. Solar and wind follow natural gas, with 6.2 GW and 5.3 GW respectively, accounting for 30 percent and 26 percent of the total capacity addition in 2019, respectively. Finally, it is also noteworthy that there were only two coal power plants in 2019 in Vietnam and Pakistan.

FIGURE 10

Investment Commitments in Infrastructure Projects with Private Participation in the Energy Sector in EMDEs by Technology



In terms of private investment volume, the most dominant forms of technology in 2019 were solar and wind, each accounting for 28 and 26 percent of total electricity-generation projects (Figure 10).

2019 saw 15 **electricity-transmission** projects. At US\$4.7 billion, private investment commitment in power transmission project is the largest in past five years. The largest project is the Matiari-Lahore Transmission Line Project in Pakistan. It is the first power transmission line in Pakistan financed through the private sector. Sponsored by a Chinese SOE, the project will be a part of the Belt and Road Initiative.

There was one **natural gas** project- the privatization transaction by the state oil group Petrobras of its network of gas pipelines to French Engie and Canadian fund CDPQ for US\$8.6 billion. A series of similar privatization transactions is expected in Brazil, under the new president, as the country has launched large-scale privatization and concession projects.

WATER AND SEWERAGE:

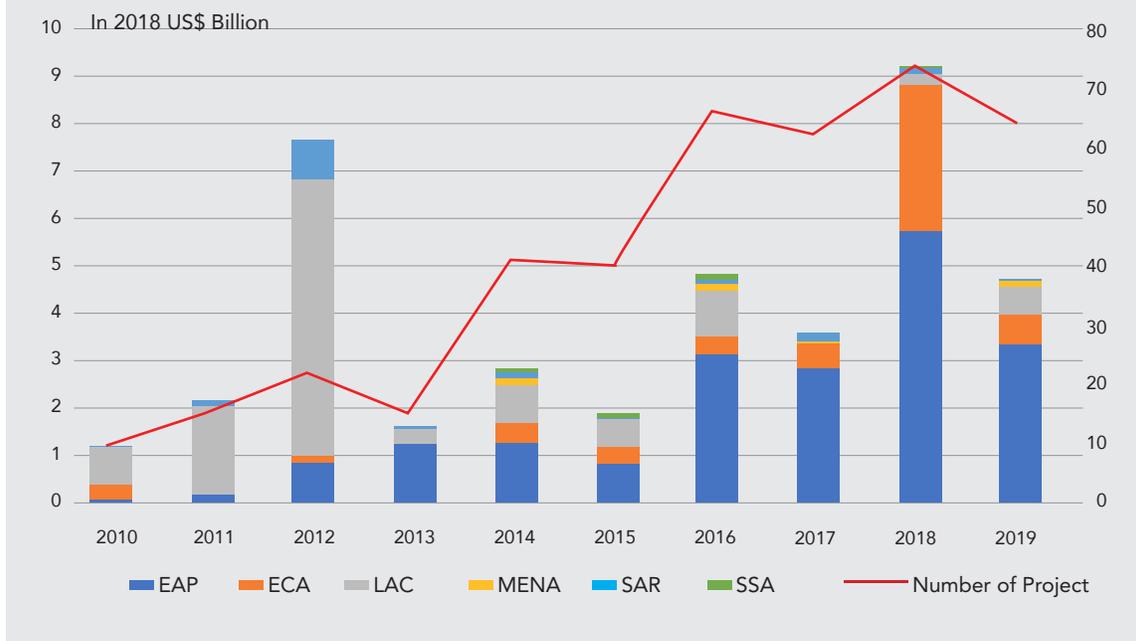
At US\$4.0 billion across 51 projects, investment in the water sector in 2019 saw a five percent increase over 2018 levels of US\$3.8 billion but a 13 percent increase over the five-year average. The majority of investment commitments in the water sector came from China. China accounted for 83 percent of the investments in the water sector in 2019, with US\$3.3 billion across 44 projects. Brazil and Vietnam received US\$313 and US\$159 million worth of investments respectively.

Other countries with water sector investments were Indonesia with a drinking water supply system project, the Philippines with two water management contracts, and Bangladesh with a water distribution project. The project in Bangladesh is the first successful closure of a water distribution project in the South Asia region and the first of its kind in the country as recorded in the PPI database.

MUNICIPAL SOLID WASTE (MSW):

Managing waste properly is essential for building sustainable and livable cities, but it remains a challenge for many developing countries and cities. Effective waste management is expensive and operating essential municipal service requires integrated systems that are efficient, sustainable, and socially supported. In order to reflect current issues and trends, the PPI database has begun collecting data on municipal solid waste infrastructure since 2019. From 2009 to 2018²², 353 projects with a total investment of \$35.2 billion were recorded in the MSW sector. This accounted for around 2 percent of global private investment in infrastructure on average, but in 2018—which saw the highest level of investment in these projects—the share was as high as 10 percent.

FIGURE 11
Investment Commitments in Infrastructure Projects with Private Participation in Municipal Solid Waste Sector, 2010-2019



²²Projects in the MSW sector were backfilled in the PPI database from 2009 to 2018, along with new data collection in 2019. More detailed insights into the MSW sector in the last decade has been published in a separate sector report previously.

In 2019, a total of US\$4.7 billion was invested across 64 projects in MSW, and accounts for five percent of total PPI investment (Figure 11). The majority of the investment commitments (US\$3.4 billion) were channelled to treatment and disposal projects. Among treatment and disposal projects, Incineration and waste to energy technology was the most popular mode at US\$3.2 billion. The second largest subsector for MSW is collection/transport at US\$710 million, followed by integrated MSW at US\$598 million. These investment transactions will add capacity of 46.5 million tons of solid waste processing in developing countries.

Historically, China has the largest investment in MSW and this is still the case in 2019 at US\$3.3 billion of investment. Other countries with MSW investment transactions are Brazil, Serbia, Romania, Morocco, Russia, and Turkey. In Romania, MSW projects transaction have occurred every year since 2014.

INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)

BACKBONE:

In the ICT sector, a total of US\$174 million was invested across three projects. These projects were in Comoros, Cambodia, and Cabo Verde and were fully funded by multilateral institutions. A fiber Optic Communication Network project in Cambodia is one of the larger projects in 2019 at US\$75 million. Funded by the AIIB, the project supports the development of both fiber backbone network and a metro network in Cambodia. There was also one network expansion project in Comoros in which IFC provided a loan of US\$15 million to Telma Comoros, the project company, to expand its network nationwide.

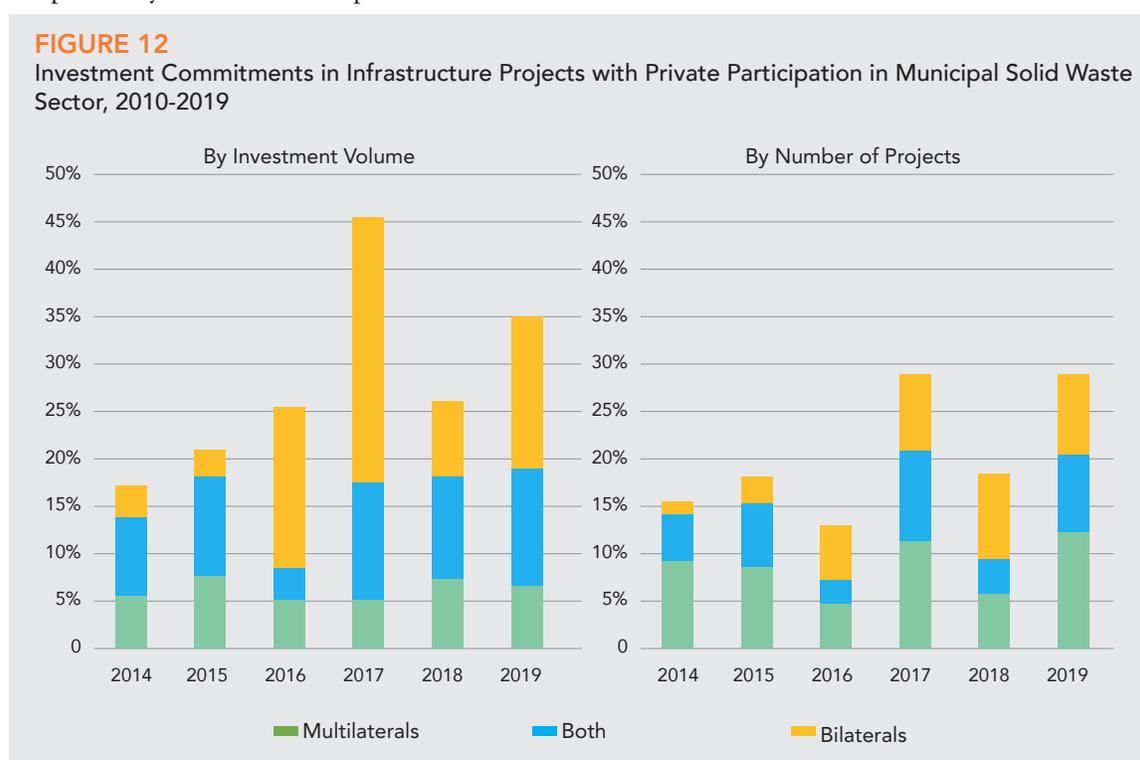
²³DEFIs for the purposes of this report is used to define multilateral institutions and bilateral agencies with a development mandate, as well as export credit agencies with a mandate to support domestic businesses in pursuing investments abroad.

5. Financing Trends

5.1. DEVELOPMENT AND EXPORT FINANCE INSTITUTION (DEFI) SUPPORT²³

DEFI SUPPORT

In 2019, 118 projects received some form of DEFI support. This accounted for 29 percent of all PPI projects, and matched the highest level of DEFI involvement in the past five years seen in 2017 (Figure 12). By investment value, projects with DEFI support accounted for 35 percent of total investment commitments. With seven megaprojects receiving DEFI support, 2019 had the second highest level in the past five years, with a nine percent increase over 2018.



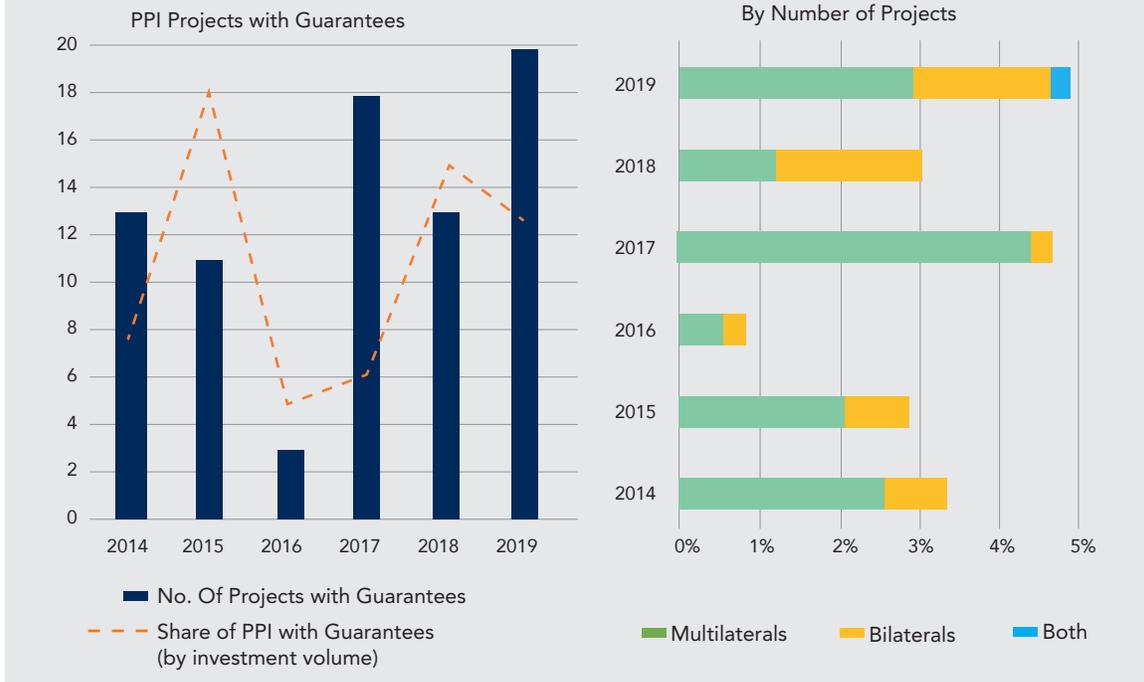
DEFI support tends to be more focused in the energy sector, with 79 percent of DEFI support going to energy projects. Region-wise, SSA had the most projects with DEFI support (87 percent), whereas all other regions had less than half their projects supported by DEFIs. Regions that have relatively lower levels of financial sector development tend to rely heavily on DEFI support through debt or guarantees to encourage investment in infrastructure.

The DEFIs provided direct debt support of US\$11.9 billion in 2019; of this, 60 percent or US\$7.0 billion of direct loans was provided by bilateral institutions to 56 projects. The multilateral institutions provided US\$4.9 billion in direct loans to 72 projects and syndication support of US\$186 million to two projects. IFC, European Bank for Reconstruction and Development (EBRD), Asian Development Bank (ADB), Inter-American Development Bank (IDB), and Asian Infrastructure Investment Bank (AIIB) provided the majority of multilateral support (75 percent), with a total of US\$3.7 billion given in loans.

GUARANTEES²⁴:

FIGURE 12

Investment Commitments in Infrastructure Projects with Private Participation in Municipal Solid Waste Sector, 2010-2019



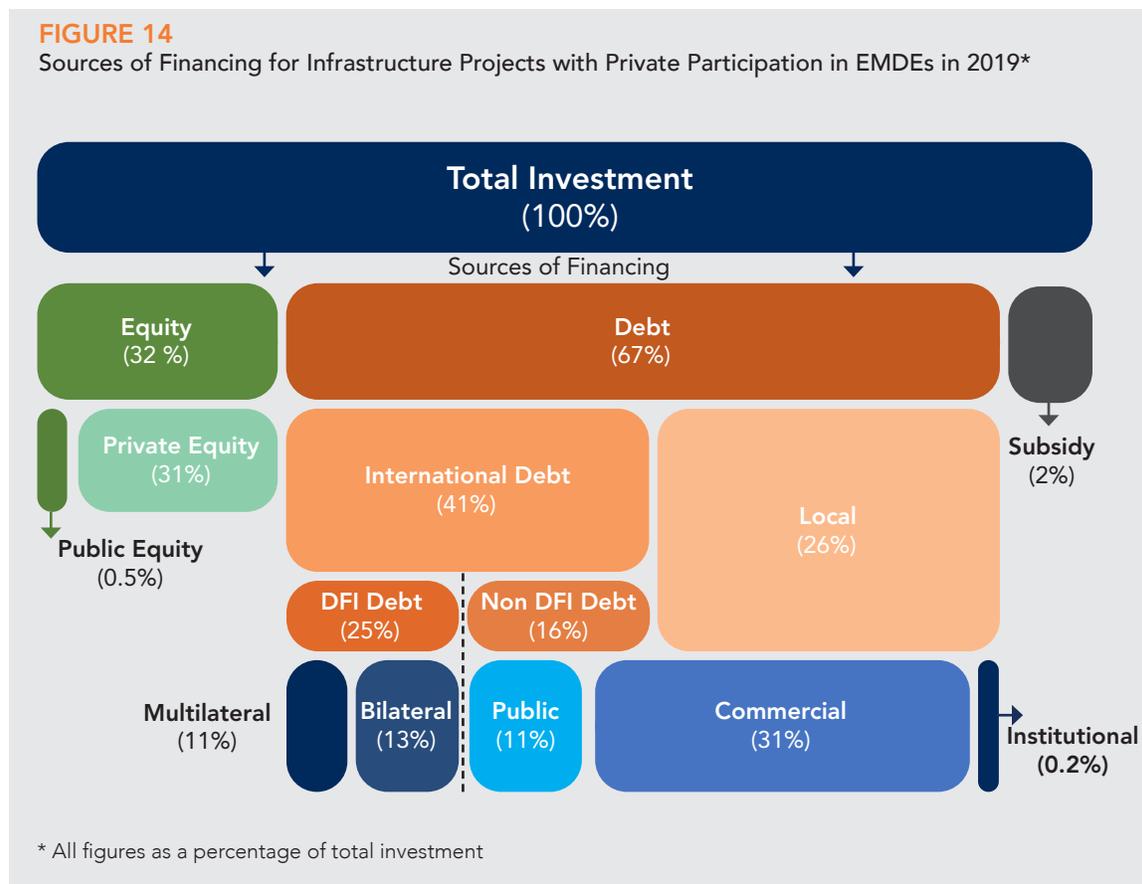
In 2019, 20 projects in 15 countries received guarantee support from DEFI, which is the highest number of projects receiving such support in the past five years. Although the share of total PPI investment volume receiving guarantee support is lower than in 2018, it is still higher than 2016 and 2017. The share of number of projects receiving support is also the highest in the past five years at five percent (Figure 13). 60 percent of these projects were in renewable-energy generation, with other five projects in natural gas, two projects in roads and one project in municipal solid waste treatment. Notably, a renewable-energy project in Argentina received guarantees from the World Bank and from an export credit agency in 2019. IDA countries received the most guarantees in 2019, with eight projects with guarantees originating from these countries. Six of these projects received guarantees from the World Bank Group, indicating its efforts to increase investment confidence and decrease risk. LAC also accounted for a large share (35 percent) of the projects with guarantees, but most of these came from bilateral organizations.

²⁴At this stage the PPI Database only covers which projects received guarantees from which entities and not any details on what the guarantees covered or what the guarantee amount was. Hence, for the projects receiving guarantee support, the debt to such projects is categorized as per the debt provider classification.

5.2. FINANCING MIX

FIGURE 14

Sources of Financing for Infrastructure Projects with Private Participation in EMDEs in 2019*



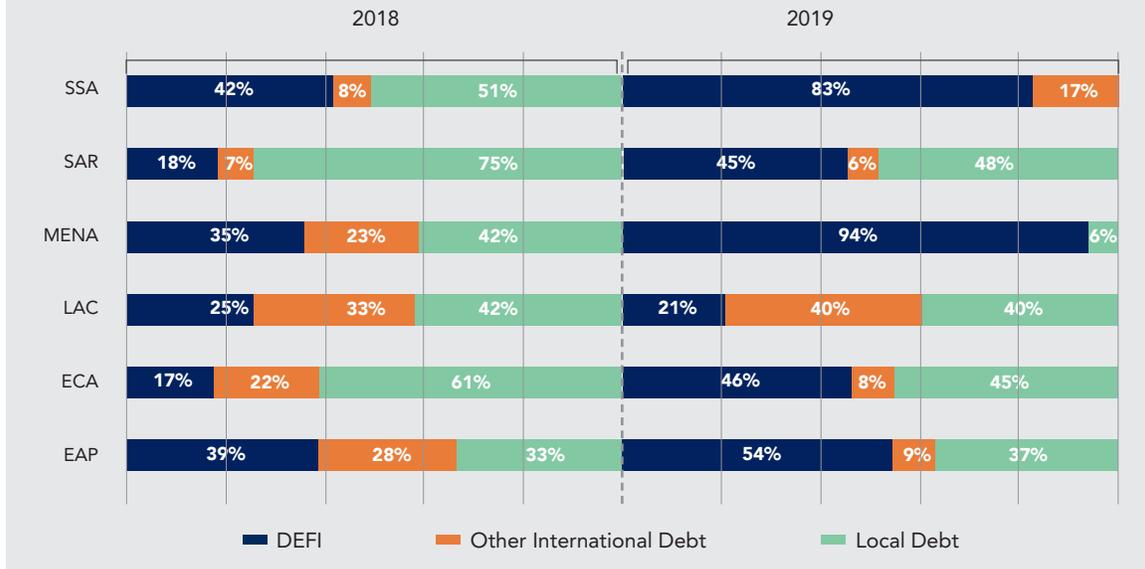
In 2019, detailed financing information was available for 159 projects, amounting to approximately 74 percent of PPI projects by investment value (US\$50.1 billion of US\$67.5 billion). All information in this section is based on these projects. Of these projects, investments went mostly towards building physical assets. There was a total of \$840 million earmarked for government fees in India, Afghanistan and Vietnam. Financing information was not available for China's 142 projects.

With respect to the financing provided, of the total US\$50.1 billion mentioned above, approximately 13 percent (US\$6.5 billion) came from public sources, 62 percent (US\$31.2 billion) came from private sources, and 25 percent (US\$12.4 billion) came from DEFI sources. Figure 14 provides a detailed breakdown of the sources for this investment.

Of the US\$15.9 billion in total equity provided in 2019 for 128 projects, financing largely came from private sources. These accounted for nearly 98.5 percent of total equity, with the remaining 1.5 percent of equity, or US\$235 million, financed by state-owned enterprises or governments that participated in joint-venture projects. Seventeen projects recorded direct government support via capital subsidies, and one had government support via in-kind.

FIGURE 15

Share of International and Local Debt by Region for Infrastructure Projects with Private Participation in EMDEs, 2018 and 2019



A total debt of US\$33.4 billion was raised in 2019, of which international debt providers played a more active role, accounting for more than 60 percent, up from 51 percent in 2018 (Figure 15). The high levels of international debt involved in the Petrobras divestiture in Brazil (US\$4.2 billion), increased the level of international funding, and accounted for 20 percent of total international debt. Additionally, megaprojects in Vietnam and Pakistan had high levels of international funding, thereby adding to the role of international lenders in 2019.

DEFIs played a much larger role in financing in 2019 than in 2018, accounting for 61 percent of international debt. While macroeconomic uncertainties from trade tensions, economic stress in Argentina and Turkey, and the continued downward revisions of global growth by IMF have an impact on commercial and local debts, DEFI lending patterns tend to be less influenced by these trends as these institutions encourage development and growth in countries. SSA, MENA, EAP, ECA and SAR saw substantial portions of DEFI debt, whereas LAC was the only region where international debt came largely from other sources.

Interestingly, MENA and SSA, two regions with the lowest PPI investment, saw majority of its debt (100 percent and 94 percent respectively) coming from international sources. In fact, for the past four years, MENA and SSA have regularly relied more on international loans for projects with the exception of South Africa, where financial sector development is more advanced compared to the surrounding regions. This highlights the importance of the level of financial sector development in countries in encouraging private sector investment in infrastructure especially when the global macroeconomic environment is not clear as it was in 2019.

In 2019, nearly half the debt (46 percent) was funded by commercial lenders²⁵, with a four percent dip from 2018 figures. Additionally, new methods of commercial financing have emerged. The Innovent Oualidia 1 and 2 projects in Morocco had a crowdfunding portion where 720 individual investors invested a total of US\$1.08 million. Innovent has been using this alternate method of financing for the past four years, across 20 projects, including an ongoing attempt to finance solar and wind projects in the Comoros and Namibia.

The commercial debt financing in LAC (US\$9.2 billion) was most significant, accounting for 59 percent of the total commercial debt raised globally. This was due to the high levels of commercial debt in the Petrobras divestiture megaproject in Brazil (US\$5.9 billion), which accounted for 38 percent of total commercial debt and made up nearly a tenth of total investment in infrastructure in 2019. Overall, total foreign direct investment into emerging markets has been dominated by LAC with the exception of China. The strong emphasis on regulations in the region, having PPPs almost accepted widely as a procurement tool, and the widespread adoption of national infrastructure plans has aided this²⁶. Brazil in particular saw large levels of investment. The Institute of International Finance's annual capital flow database²⁷ shows that the forecasted flows for Brazil's FDI debt in 2019 was nearly equal to that of Asia (excluding China), and in 2018, Brazil's FDI debt was double that of Asia's (excluding China).

²⁵Commercial debt is only the debt raised from commercial banks, and not necessarily all debt raised on commercial terms. Multilateral and bilateral agencies such as the IFC and the Asian Development Bank, and export credit agencies or state-owned banks lending overseas may also in some cases extend debt on commercial terms, but they are classified here as multilaterals, bilaterals or public, reflecting their government ownership (and development mandate in the case of multilaterals and bilaterals).

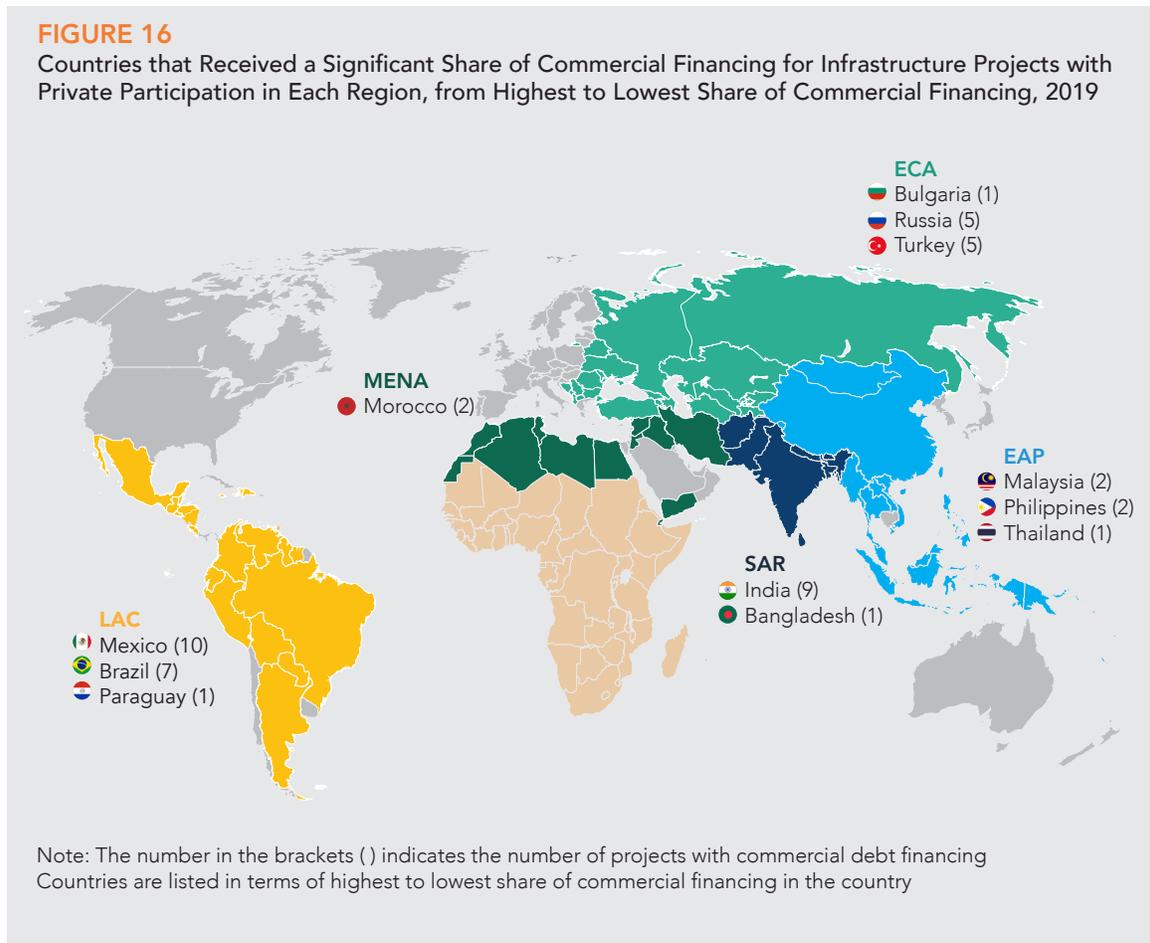
²⁶EIU. 2019. The 2019 Infrascope: Evaluating the environment for public-private partnerships in Latin America and the Caribbean. https://infrascope.eiu.com/wp-content/uploads/2019/04/EIU_2019-IDB-Infrascope-Report_FINAL-1.pdf

²⁷The IIF database has been an important source of economic and financial data for over 30 years, providing annual figures and forecasts for nearly 60 emerging and frontier markets. More information can be found at: [_](#)

India had the second-highest commercial debt (US\$1.7 billion), which made up 63 percent of its total debt. Russia came in third, with its US\$1.4 billion in commercial debt accounting for 98 percent of the total debt seen in 2019. Malaysia, Morocco, and Bulgaria raised all of their debt from commercial sources; there were also countries whose debt from commercial sources accounted for more than half of their total debt (Figure 16).

FIGURE 16

Countries that Received a Significant Share of Commercial Financing for Infrastructure Projects with Private Participation in Each Region, from Highest to Lowest Share of Commercial Financing, 2019



ANNEX- 1 : LIST OF DEFI AGENCIES WHICH SUPPORTED PROJECTS IN H1 2019

Multilateral	Bilateral	
	Development Institution	ECAs
ADB	Abu Dhabi Fund for Development	Bpifrance Assurance Export (BPIAE)
AfDB	AFD	KfW IPEX-Bank
Africa Finance Corporation	Vnesheconombank Russia	CESCE
AIIB	Belgian Investment Company for Developing Countries	Credendo
BSTDB	Canadian Climate Fund	EKF Denmark
BOAD	China Co-financing Fund for Latin America and the Caribbean	Euler Hermes
Caribbean Development Bank	China Development Bank	Export Import Bank of China
CAF	Commonwealth Development Corporation	Export Import Bank of Korea
EADB	DEG	Finnvera
EAIF	Development Bank of Austria	Hungarian Export Import Bank
EBRD	Development Bank of Southern Africa	Korea Trade Insurance Corporation
EDB	DFID	Nippon Export and Investment Insurance
EIB	EDCF	Norwegian Export Credit Guarantee Agency
EU-Africa Infrastructure Trust Fund	FinnFund	
EU's Caribbean Investment Facility	FMO	
IADB	ICO	
IDA	IFU Denmark	
IDB	International Cooperation and Development Fund (Taiwan ICDF)	
IFC	JBIC	
Interact Climate Change Facility	Korea Development Bank	
Green Climate Fund	KfW (DEG)	
Green for Growth Fund	OPIC	
Leading Asia's Private Infrastructure Fund (LEAP)	Saudi-Bangladesh Industrial & Agricultural Investment (SABINCO)	
MIGA	Swedfund International AB	
NDF		
Nordic Environment Finance Corporation (NEFCO)		
OFID		
Renewable Energy Performance Platform		
World Bank		



About the Private Participation in Infrastructure Projects Database

The Private Participation in Infrastructure Database is a product of the World Bank Group's Infrastructure, PPPs and Guarantees team. Its purpose is to identify and disseminate information on private participation in infrastructure projects in low- and middle-income countries. The database highlights the contractual arrangements used to attract private investment, the sources and destination of investment flows, and information on the main investors. The site currently provides information on more than 10,000 infrastructure projects dating from 1984 to 2019. It contains over 50 fields per project record, including country, financial closure year, infrastructure services provided, type of private participation, technology, capacity, project.

For more information, please visit: ppi.worldbank.org



About the World Bank Group

The World Bank Group plays a key role in the global effort to end extreme poverty and boost shared prosperity. It consists of five institutions: The World Bank, including the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA); the International Finance Corporation (IFC); the Multilateral Investment Guarantee Agency (MIGA); and the International Centre for Settlement of Investment Disputes (ICSID). Working together in more than 100 countries, these institutions provide financing, advice, and other solutions that enable countries to address the most urgent challenges of development.

For more information, please visit: www.worldbank.org

