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Philippine Infrastructure and Connectivity:

Challenges and Reforms

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Philippine Infrastructure and Connectivity: Challenges and Reforms

Gilberto M. Llanto[i]

I. Introduction

There is a great need to improve inter-island connectivity within the Philippines and connectivity with other countries, especially the economies of East Asia and the ASEAN. Stronger external and inter-island connectivity will enable the country to take advantage of trade, investment, and growth opportunities in this dynamic region, thereby fostering the inclusiveness of growth. Connectivity is a function of geography and it is a major challenge for the Philippines, an archipelago of 7,107 islands, with the main population centers and economic activities in three major island groupings of Luzon, Visayas and Mindanao. This will require investments in infrastructure at a much more substantial level than what has been done in recent years. Poor and inadequate infrastructure was found out as a critical development constraint in the Philippines (Canlas, Zhang, & Khan, 2007) with adverse consequences on growth and poverty reduction. Infrastructure provision has been quite a struggle but in view of its critical importance in sustaining growth, it remains as a major policy priority by the government.

The Philippines has performed creditably well in the past few years after years of a boom-bust cycle of performance since the postwar period, drawing strength from past and present reform efforts and better governance. In 2014, gross domestic product (GDP) grew in real terms at 6.1 percent in 2014, and in 2015, most recent forecasts put it at around 5.7 percent, which is respectable considering the prolonged weaknesses in the global economy, the slowdown in exports, and volatiliy in international capital markets. **Table 1** compares GDP growth in the ASEAN.

Table 1. GDP growth in the ASEAN, 2010-2014 (in percent)

	2010	2011	2012	2013	2014
Brunei Darussalam	2.6	3.4	0.9	–1.8	-1.2
Cambodia	6.0	7.1	7.3	7.5	7.0
Indonesia	6.2	6.5	6.2	5.8	5.0
Lao PDR	8.1	8.0	7.9	8.0	7.4
Malaysia	7.4	5.1	5.6	4.7	6.0
Myanmar	9.6	5.6	7.6	7.5	7.7
Philippines	7.6	3.7	6.8	7.2	6.1
Singapore	15.2	6.1	2.5	3.9	2.9
Thailand	7.4	0.6	7.1	2.9	0.7
Viet Nam	6.4	6.2	5.2	5.4	6.0

Source: Asian Development Bank

The crucial question is whether the Philippines can sustain its relatively high growth trajectory in the future or lose momentum and lapse into a low growth path. Among other factors such as the political will to implement reforms and the quality of those reforms, substantial investments in infrastructure and connectivity will make a lot of difference.

The Philippines has implemented various reforms to address the infrastructure lack but it will take time to produce infrastructure that will be at par with those of neighboring countries in quality and adequacy. There is scope for more serious efforts in improving fiscal space, reforming budgetary processes, improving public-private partnerships (PPPs) and the regulatory environment, and ensuring better coordination among government agencies to address problems of connectivity and infrastructure.

The rest of the paper is structured as follows. Section 2 discusses the status of infrastructure and connectivity in the Philippines with particular mention of new types of infrastructure (ICT and e-commerce) that have created new linkages and opportunities for the economy. Section 3 provides a summary of recent research findings on the impact of connectivity and infrastructure on the economy. Section 4 discusses the challenges of infrastructure provision, with particular focus on PPP arrangements. Section 5 concludes.

II. Philippine Infrastructure and Connectivity

Comparison with other ASEAN countries and the three East Asian economies of China, Korea and Japan shows the Philippines lagging behind in major indicators of connectivity, access and quality of infrastructure (**Tables 2 and 3**).

Table 2. Infrastructure Access in the ASEAN

Indicator	Philippines	Indonesia	Malaysia	Myanmar	Thailand	Vietnam
Energy						
Percentage of population with access to electricity network, 2012 [1]	87.5	96.0	100.0	52.4	100.0	99.0
Percentage of households reporting access to electricity, 1998/1997 [2]	71.3 (1998)	80.3 (1997)	-	-	-	78.4 (1997)
Water supply						
Percentage of population with access to improved water sources, 2012 [1]	91.2	93.0	100.0	94.8	96.7	98.2
Sanitation						
Percentage of population with access to improved sanitation facilities, 2015 [1]	73.9	60.8	96.0	79.6	93.0	78.0
Roads						
Total length of road (km.), 2012 [3]	31,598	504,184	182,699	151,298	231,620	326,000
Road density, 2011 (km of	10.5	26.1	47.0	5.6	-	-

Indicator	Philippines	Indonesia	Malaysia	Myanmar	Thailand	Vietnam
road per 100 sq. km of land area) [4]						
Total length of expressways (in km.) [3]	400	949	1,969	589	209	120
Percentage of total roads paved, 2014 [3]	86.0	56.7	79.0	51.6	83.2 (2013)	66.3 (2012)
Telecommunication						
Fixed-broadband subscribers per 100 inhabitants, 2014 [5]	23.2	1.2	10.1	0.3	8.2	6.5
Percentage of individuals using the Internet, 2014 [5]	39.7	17.1	67.5	2.1	34.9	48.3
Fixed-telephone subscriptions per 100 inhabitants, 2014 [5]	3.1	11.7	14.6	1.0	8.5	6.0
Mobile-cellular telephone subscriptions per 100 inhabitants, 2014 [5]	111.2	126.2	148.8	49.5	144.4	147.1
GDP per capita, 2014, current US$ [1]	2,843.1	3,514.6	10,829.9	1,197.5	5,560.7	2,052.3

Sources:

1: World Development Indicators – World Bank

2: Antonio Estache and Ana Goicoechea - World Bank; data created and last modified in November 2013

3: ASEAN-Japan Transport Partnership (AJTP)

4: World Development Indicators – World Bank; author's calculation for Philippines data using Department of Public Works and Highways (for total road length) and WDI-World Bank (for land area, sq. km.)

5: International Telecommunication Union (ITU)

Table 3. Infrastructure Rankings out of 144 economies in the Global Competitiveness Report, 2014

Country	Overall		Road		Port		Air Transport		Railroad		Electricity Supply	
	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value
China	64	4.4	49	4.6	53	4.3	58	4.7	17	4.8	56	5.2
Japan	9	6.2	10	5.9	26	5.3	27	5.5	1	6.7	25	6.3
Korea	23	5.5	18	5.6	27	5.3	31	5.4	10	5.6	44	5.5
Indonesia	72	4.2	72	3.9	77	4	64	4.5	41	3.7	84	4.3
Malaysia	20	5.6	19	5.6	19	5.6	19	5.7	12	5	39	5.7
Thailand	76	4.1	50	4.5	54	4.5	37	5.3	74	2.4	58	5.1
Vietnam	112	3.3	104	3.2	88	3.7	87	4	52	3	88	4.2
Philippines	95	3.7	87	3.6	101	3.5	108	3.6	80	2.3	87	4.2
Philippines' rank	**7th of 8**		**7th of 8**		**8th of 8**		**8th of 8**		**8th of 8**		**7th of 8**	

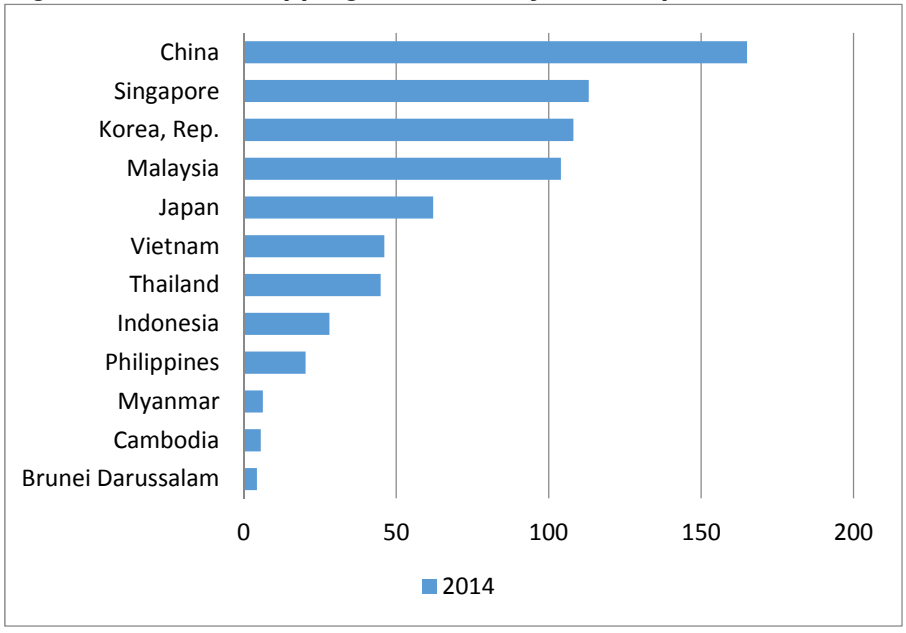
Note: 1 =poorly developed and inefficient, 7= extensive and efficient or among the best in the world.

Source: World Economic Forum, Global Competitiveness Report, 2014-2015.

The Philippines has a lower road density (kilometer of road per 100 sq.km. of land area) than other ASEAN countries but with relatively similar quality of road infrastructure (measured by paved road ratio. With respect to quality of port infrastructure, the Philippines, an archipelagic country falls behind Thailand, Indonesia and Vietnam with a score of 3.5. The average score for port quality for the Asia-Pacific region is 3.8 (Llanto, Navarro, and Ortiz, 2015). In terms of quality of air transport infrastructure, the Philippines is behind comparator countries, being below the average quality of air transport infrastructure score of 4.3 in the Asia-Pacific region (Llanto, Navarro, and Ortiz, 2015). In rail transport infrastructure, the Philippines scored 2.3 and in electricity supply 4.2.

An important measure of connectivity is the liner shipping connectivity index (**Figure 1**). The liner shipping connectivity index captures how well countries are connected to global shipping networks. It is computed by the United Nations Conference on Trade and Development (UNCTAD) based on five components of the maritime transport sector: number of ships, their container-carrying capacity, maximum vessel size, number of services, and number of companies that deploy container ships in a country's ports. The higher the index, the more connected an economy is through shipping to the rest of the world. A low liner shipping connectivity index and the poor quality of port infrastructure imply lost opportunities in external trade and commerce.

Figure 1. Liner shipping connectivity index (maximum value in 2004 = 100), 2014



Source: World Bank's World Development Indicators

Inter-island connectivity is achieved through a network of small municipal ports, relatively old domestic ships and the recently established Road- Roll-On Roll-Off Terminal System (RRTS). The RRTS is an inter-modal transport system which is a combined road-nautical highway, which

is appropriate for an archipelagic country such as the Philippines. It has three north-south trunks and lateral connections to various ports.

Recent data on ICT development show a wide digital divide among comparator countries and some indication of the shift from basic landline telephone infrastructure to mobile telephony and broadband internet as newer and modern means of communication and connectivity. The Philippines faces a similar experience (**Table 4**)**.** Mobile cellular density is an average of 100.24 mobile cellular subscriptions per 100 people in the Asia Pacific region (Llanto, Navarro, & Ortiz, 2015). The Philippines' mobile density is above this average. The average fixed broadband internet subscribers in the region is 36.4 subscriptions per 100 people. The fixed broadband internet subscription in the Philippines is also higher than regional average.

Table 4. Summary of ICT Infrastructure Indicators, 2013

Country	Telephone lines (per 100 people)	AAGR (%)	Mobile cellular subscriptions (per 100 people)	AAGR (%)	Fixed broadband Internet subscribers (per 100 people)	AAGR (%)
Brunei Darussalam	13.58	-6.28	112.21	7.41	64.50	7.39
Cambodia	2.78	35.35	133.89	42.33	6.00	44.40
China	19.27	-3.94	88.71	14.59	45.80	23.39
Indonesia	12.30	9.34	125.36	25.10	15.82	20.32
Japan	47.99	0.61	117.63	5.61	86.25	3.22
Korea, Rep.	61.57	2.43	111.00	3.93	84.77	1.80
Lao PDR	10.37	26.63	68.14	25.10	12.50	39.93
Malaysia	15.26	-1.26	144.69	8.45	66.97	4.08
Myanmar	1.00	0.00	12.83	63.08	1.20	43.91
Philippines	3.20	-2.52	104.50	12.57	37.00	27.20
Singapore	36.35	-1.50	155.92	6.04	73.00	2.27
Thailand	9.04	-2.12	140.05	14.79	28.94	8.54
Vietnam	10.13	0.20[b]	130.89	35.84	43.90	16.72

Notes:

Telephone lines (per 100 people) - Telephone lines are fixed telephone lines that connect a subscriber's terminal equipment to the public switched telephone network and that have a port on a telephone exchange. Integrated services digital network channels ands fixed wireless subscribers are included.

Mobile cellular subscriptions (per 100 people) - Mobile cellular telephone subscriptions are subscriptions to a public mobile telephone service using cellular technology, which provide access to the public switched telephone network. Post-paid and prepaid subscriptions are included.

Fixed broadband Internet subscribers (per 100 people) - Fixed broadband Internet subscribers are the number of broadband subscribers with a digital subscriber line, cable modem, or other high-speed technology.

a – covered period, 2009 to 2013

b – covered period, 2006 to 2013

c – covered period, 2007 to 2013

AAGR – average annual growth rate from 2005 to 2013

n.d. – no available data

Source: World Development Indicators - World Bank

The liberalization of the telecommunications industry in the nineties created an enabling environment that have resulted in a substantial role and significant investments by the private sector. This new type of infrastructure and connectivity has been a critical factor in the success of the Philippines in services, particularly in the business process outsourcing (BPOs) industry, which has been a major employment generator and foreign exchange earner (**Table 5**). In addition, the SGV reports that the Philippine government developed the Philippines Cyberservices Corridor (PCC). Stretching 600 miles from Baguio City in Northern Luzon to Zamboanga in Mindanao, the PCC houses call centers and BPO companies, which are being served by a high-bandwidth fiber backbone and digital network. As of 31 October 2012, the PEZA reports 176 operating IT Parks or Centers and 65 more being developed. These zones serve as a one-stop-shop for e-services investors who may want to invest in the Philippines (SGV, 2013).

The Philippines has started to develop comparative advantage in several areas of this emerging industry. Export revenues in 2012 amounted to US$12.5 billion, with contact centers contributing the most. Total direct employment reached around 770,000 in 2012, up from 680,000 in 2011. A recent report stated that the IT-BPO industry is set to grow between 12 to 15 percent per annum and cover at least 20 percent of the projected US$250 billion global outsourcing industry by 2020, assuming consistent support from the government (Magkilat, 2015).

Table 5. IT-BPO Outsourcing Industry Revenue in ASEAN and India, 2008

Economy	IT-BPO Industry Revenue ($ billion, 2008)	IT-BPO Industry Revenue (% of GDP, 2008)	IT-BPO Industry Revenue ($ per Capita, 2008)	Global IDI Ranking (2010)
Indonesia	1.8	0.4	7.7	101
Malaysia	2.7	1.2	98.2	58
Philippines	6.1	3.5	67.6	92
Thailand	2.6	1	38.1	89
Viet Nam	0.6	0.7	7.1	81
India	51.5	4.2	43.2	116

Source: Mitra (2013)

As an intermediate input, services are a vital element in maintaining efficient global value chains (GVCs). Services, e.g., distribution and communication services, are vital for efficient movement of goods from production to consumption. The Philippine service sector growth has been exceeding 7 percent in the past few years, and the share of financial intermediation, real estate, renting, and business activities, which are substantial parts of the IT-BPO industry, is the highest among the different activities in the services sector. The industry has evolved from providing call center services into becoming a globally competitive provider of many IT application services, business processing services, and engineering services. Competency in

knowledge process outsourcing including business and financial research, data analytics, animation, and other high-end processes are emerging. In engineering services, there is emerging capacity for downstream and upstream product engineering from concept design to simulation to design engineering. The IT-BPO industry has developed a large client base in OECD countries, principally the United States.

The developments in the ICT sector and improved consumer literacy have also spurred the growth of e-commerce in the country. E-commerce received a big boost with the passage of the Electronic Commerce Act in 2000. The Act facilitates computerized transactions by giving electronic messages and electronic signatures legal status. The Act makes hacking and software piracy a crime and provides for privacy and confidentiality (Minges & others, 2002). The signing into law of the Cybercrime Prevention Act and the Data Privacy Act in the 15th Congress is an important reform as it will strengthen investor and consumer confidence in the industry.

Several businesses have embraced the opportunities offered by online business such as the financial services sector, remittance services, business to business (B2B) e-commerce, B2BPriceNow, which seeks to provide agricultural information to the nation's farmers. An attractive business to consumer (B2C) market are the millions of Filipinos working abroad, with higher incomes and better access to the Internet than the average citizen in the country. Around 30 percent of Filipinos in the U.S. are estimated to be Internet users (Minges & others, 2002). There is a need to invest in higher speed broadband. New generation fiber optic technology is needed for heavy business tasks, such as transferring large amounts of information at very fast speeds (Arangkada, 2015).

In sum, the Philippines has lagged behind neighboring countries with respect to traditional infrastructure, which affects connectivity with major trading partners and inter-island connectivity. However, it has made great strides in using new types of infrastructure driven by advances in ICT to create innovative business opportunities and employment. The interesting point in this phenomenon is the large role played by the private sector in those new types of infrastructure, which has been driven by an environment that is conducive to greater private participation. Private investments have largely been instrumental in the country's success in the emerging IT-BPO industry.

III. Impact of connectivity and infrastructure

A few studies have indicated the significant benefits on the Philippine economy of improvements in infrastructure and connectivity. At the macro level, the World Bank (2005) has estimated a close correlation of 85 percent between GDP and total infrastructure spending in the Philippines. in 1985‑2002. Efficient inter-island connectivity is critical for an archipelagic country such as the Philippines. Shipping is responsible for at least 80% of inter-island movement of both passengers and cargo but inefficient land and maritime transport has constrained inter-island trade and growth. Lantican (2010) reported that logistics costs, including transportation costs, account for as much as one-third of the total cost of producing high-value vegetables.

The ADB (2010) points to isolation and connectivity of island provinces as a major constraint on economic integration and social interaction. However, at this time island provinces are not really isolated but certainly there is poor inter-island connectivity, which denies small local enterprises acesss to the large urban markets, new technologies, and modern business practices. This situation has created poor incentives for increasing production and investments in those island provinces. An important development is the establishment of the Road-RORO Transport System (RRTS), a nautical highway to address the challenges in inter-island connectivity. According to the 2010 ADB study the RRTS has established north-south links and lateral access in the archipelago, which have stimulated the growth of local businesses, and increased local producion and domestic tourism. On the other hand, De los Reyes an others (2011) reported that the inadequate volume of roll on-roll-off (RORO) ship hauls and the inappropriate design of such RORO ships for transport of agricultural products have led to cost inefficiencies and large postharvest losses. However, the expected investments in newer RORO vessels and better port facilities and road links have stalled in view of funding difficulties.

Llanto (2007) showed that infrastructure has a significant impact on regional GDP growth. Differences in regional growth in the Philippines could be traced to differences in the availability of infrastructure (Basilio & Gundaya, 1997; Manasan & Mercado, 1999; Llanto, 2007). Infrastructure is an important variable in regional convergence (Cuenca, 2004). Manasan and Chatterjee (2003) found that better allocation of infrastructure investments across regions help lagging regions to catch up and increase their growth potential.

Several studies showed the significant impact of roads in increasing local outputs (Evenson & Quizon, 1991), higher agriculture productivity growth in 1974-1980 driven by public infrastructure (Teruel & Kuroda, 2004), and the subsequent decline in agricultural productivity due to a reduction in rural infrastructure (Teruel, 2005). Access to electricity and paved roads have positive impacts on agricultural labor productivity (Llanto, 2013).

Higher transport costs due to poor rural roads increase the cost of urea fertilizer, which discourages widespread use, but in areas with better rural roads, fertilizer costs less, which encourages its higher use (Manalili & Gonzales (2009). Improved road connectivity led to positive changes in production, employment, transport services in a fishing community and a stronger linkage between a resource area (fishing community) and urban markets (Olsson, 2008). Roads complemented by schooling investments have positive significant impacts on the welfare of the poor. This means that a 1% increase in road access coupled with schooling results in a 0.32% rise, via growth, in the mean incomes of the poor. Irrigation has a significant pro-poor bias, that is, a 1% increase in irrigation leads to a 0.31% rise in the incomes of the poor (Balisacan & Pernia, 2002).

IV. Challenges in improving infrastructure and connectivity

The Philippines is an archipelago composed of more than 7,000 islands and this presents formidable difficulties for mobility and connectivity. Investing in infrastructure and logistics in an

archipelagic country is not as straightforward as in the case of a country with a contiguous land mass. Due to years of underinvestment, infrastructure stocks and levels of access in the Philippines are low compared to most of its ASEAN neighbors. However, public investments in infrastructure have started to pick up in the past decade (**Table 6**). This is estimated at around 2 percent of GDP in 2014 compared to 1.24 percent in 2006 (source), but still below the infrastructure investment effort of other ASEAN countries.

Table 6. Philippine Public Infrastructure Expenditure (in billion pesos)

	2006	2007	2008	2009	2010	2011	2012	2013	2014[1]	2015[2]
Expenditure	0.1	99.9	138.5	168.0	156.6	136.5	182.5	229.0	262.6	328.0
Annual GDP (current prices)	6,271	6,893	7,721	8,026	9,004	9,708	10,567	11,548	12,634	-
As % of GDP	1.24%	1.45%	1.79%	2.09%	1.74%	1.41%	1.73%	1.98%	2.08%	

[1]Preliminary figures
[2]Proposed
Source: Department of Budget and Management's Budget of Expenditures and Sources of Financing (various years)

While the public sector has traditionally financed and provided infrastructure services, there is a need to attract private sector expertise and finance to help deal with the infrastructure back log and the huge demand for infrastructure especially in growing urban centers. After a slow start, it seems that the present government has injected new life into the PPP program that has stalled during a past administration for various reasons. The government's PPP Center has recently announced the award of contracts with indicative project cost of around PHP 189 billion to ten PPP projects covering expressways, modernization of public facilities, including airports and transport terminals[ii]. The auctions yielded substantial concession fee payments to the government, as against pre-bid financial model results showing that the government would have to provide subsidies to enhance project cash flows (Bernardo, 2014). There are more than 40 more PPP projects in the pipeline in various stages of preparation for tendering, that is, procurement of transaction advisors, preparation of feasibility studies, finalization of project structure, review by the NEDA Investment Coordination Committee, etc. This situation is completely different from that of the past where there seemed to be some wariness and distrust of both sides of the partnership. Bernardo (2014) in particular pointed that in the past a principal source of distrust on the part of private investors, that is, the delays in tariff adjustments in power, water, rail and toll roads during politically sensitive periods. The present situation is a much more encouraging scenario than that observed by the World Bank in the 1990s. The World Bank (2005) noted that most PPP projects in the mid-1990s were mostly unsolicited proposals for private finance. These initiatives, often poorly coordinated, met with mixed results. The World Bank advised on finding a new and better approach, affirming that only better processes and stronger institutions will attract private funding.

The modest successes in implementing PPP infrastructure projects has freed up resources that could be used by the government for other development spending. In particular, the Secretary of Public Works and Highways has told lawmakers during his department's recent budget

hearing at the House of Representative that the government has saved PHP 300 billion worth of infrastructure costs which have been shouldered by the private sector under the PPP program. This means that the total value of projects implemented under PPP is PHP 300 billion and this will be shouldered by the private sector instead of government funding those projects[iii]. Notwithstanding these early successes certain challenges have to be addressed to improve infrastructure provision.

Expanding fiscal space. Narrow fiscal space was identified as a critical development constraint (ADB, 2007). The country has many spending priorities but it has struggled with raising the necessary revenues to finance them. It has labored to increase tax effort but progress has been slow. In 1990-1999, tax effort was at 15.5 percent possible by a comprehensive tax reform program. Tax effort peaked in 1997 at 17%. Tax effort averaged at around 12.5 percent in 2000-2012. Several factors including poor tax administration and the passage of revenue-eroding laws, e.g., individual income tax relief under Republic Act 9504, corporate income tax deduction under Republic Act 9337, have weakened the tax revenue drive. At this level of tax effort the country would not be able to raise the necessary resources for financing the huge infrastructure requirements of the country even as inadequate physical infrastructure restrains growth.

The need for a more vigorous tax collection effort is underscored by the relative importance of local funds in infrastructure spending. There has been a decline in importance of official development assistance (ODA) in infrastructure spending. Overall, local funding sources, basically tax revenues have funded 84-87 percent of infrastructure spending in the past five years (Navarro & Llanto, 2014).

On a positive note, it was shown that if it wants to, the government has the political will to increase tax revenue collection, e.g., recent passage of an expanded value-added tax, and excise tax on tobacco and liquor (Sin Tax Law). On a negative note, some politicians have recently submitted legislative proposals that would further diminish tax effort, e.g., reduction of income tax rates for individuals and corporates.

The right approach is to undertake a comprehensive, not a piecemeal, reform of tax policy and tax administration to improve tax collection and distribute the tax burden more equitably. The following have been recommended by the IMF: broadening the tax base by reducing corporate income tax holidays, narrowing the VAT gap, and adopting a new mining strategy, supported by further improvements in tax administration. The IMF estimates that if adopted, the identified tax policy measures could yield 2–3 percentage points of GDP, sufficient to finance the envisaged doubling in infrastructure spending (IMF, 2014). A comprehensive tax reform program could include reducing or eliminating fees and charges that increase the cost of doing business, e.g. airport fees, travel tax, port charges.

Improving governance of infrastructure provision. This covers regulatory frameworks covering various infrastructure services, e.g., water, electricity, toll roads, and others, including regulatory institutions, tendering process (ideally through transparent competitive bids), and optimal risk allocation. A concern is the respect for stability of contractual provisions agreed upon by government and private investors. Instability of contracts erodes the credibility of the country's investment environment. Interference with agreed-upon formulas for tariff setting for

pay-as-you go/use infrastructure such as toll roads, light rail, makes investors lose confidence in the economy. Unfortunately, there have been instances of meddling with contracts and tariff setting by politicians out to build their image before a gullible public.

Government has recently been reminded that attracting investors requires certainty and predictability in its policies (**Box 1**). There has been instances of changing rules midstream and this sends the wrong signal to investors[iv]. On the other hand, a recent Supreme Court decision ordering goverment to pay US$510 million in just compensation to the original owner of the controversial Ninoy Aquino International Airport Terminal 3 is seen as a boost to the Philippine reputation among investors, although it would have been better, according to a major daily, had it come much earlier and not after 11 years of legal wrangling that followed the government's expropriation of the terminal[v].

Box 1. Sanctity of contracts

There is the more recent case involving the Metropolitan Waterworks and Sewerage System (MWSS) and the two private concessionaires in Metro Manila. Ayala-led Manila Water Co. Inc. lost in its arbitration proceedings against the MWSS after the appeals panel ordered Manila Water to cut its basic water charge. In September 2013, the MWSS reduced Manila Water's basic charge for the rate rebasing period 2013-2017, prompting the East Zone water concessionaire to dispute the rate reduction with the International Chamber of Commerce. However, the arbitration panel agreed with a rate reduction and ruled that Manila Water was a public utility and therefore could not pass on its corporate income tax to consumers. West Zone concessionaire Maynilad Services, Inc. on the other hand, secured a favorable ruling from the appeals panel, which upheld its rate rebasing adjustment that would result in an increase in the 2013 average basic water charge. Maynilad was also allowed to recover its corporate income tax. Due to the conflicting decisions, the MWSS did not follow the ICC rulings and chose to bring the case to court.

Source: Philippine Daily Inquirer, September 15, 2015.

There is a need for greater transparency and competency in the tendering and award process to avoid any perception that tendering is tilted in favor of particular groups. Government agencies involved in the tendering of PPP projects should be competent and accountable enough to make fair and transparent decisions. This will prevent dragging the Presidency to resolve issues that could have been plainly avoided had there been more competence in the bureaucracy (**Box 2**). Bernardo (2014, page 2) is more direct: "Politicization of formal PPP processes tarnishes the program's image and dulls investors' appetites."

From another perspective, this type of behavior is a reminder of the weaknesses of institutions expected to manage the complexity of bringing in the private sector to infrastructure projects through PPP arrangements. The PPP alternative is a complex approach because of the presence of different actors with particular goals, objective functions, and interests. The task of reconciling or harmonizing diverse interests and risk allocation affecting PPP infrastructure projects, among others, can really strain the ability of uninspired bureaucrats (Llanto, 2010).

Box 2. Malacañang steps into Cavite-Laguna Expressway bidding row

Malacañang has stepped into the controversial bidding for the Cavite-Laguna Expressway (Calax) under the public-private partnership (PPP) framework. The executive branch issued an order suspending the implementation of a resolution by the Department of Public Works and Highways (DPWH) to disqualify conglomerate San Miguel Corp. from the Calax bidding. The Calax project involves the financing, design and construction, as well as operation and maintenance of the four-lane expressway that will connect the Manila-Cavite Expressway (Cavitex) and the South Luzon Expressway (SLEx). It will start at the Cavitex toll gate in Kawit, Cavite, and end at the South Luzon Expressway (SLEx)-Mamplasan Interchange in Biñan, Laguna.

In an order dated June 30 issued by the Office of the President, the execution of the June 11 DPWH resolution was "stayed, unless otherwise ordered by this office." The San Miguel unit that was bidding for the project, Optimal Infrastructure Development Inc. (OIDI), was given 30 days from its notice of appeal to submit its appeal memorandum.

The DPWH resolution suspended by Malacañang referred to the disqualification of the technical proposal of OIDI for the US$864-million tollroad project. The DPWH deemed that its bid security—an irrevocable standby letter of credit in the amount of PHP355 million issued by a universal or commercial bank—was "not in compliance" with the provisions set forth in the guidelines. The DPWH noted that the bid security issued by ANZ Bank contained an expiry date of Nov. 25, 2014, or four days short of the required expiry date of Nov. 29, 2014. ANZ, for its part, sent a formal clarification to DPWH on June 4, 2014, saying that the 180-day expiration would hold. The bank sent a second letter of clarification on June 10.

The "stay" order from Malacañang constrains the DPWH from awarding the tollroad project to Team Orion, which had submitted the highest bid after OIDI was disqualified. Team Orion offered to pay a premium of PHP11.659 billion to the government for the right to build the tollroad. Shortly before the opening of the qualified bids on June 13, however, SMC announced outside of the DPWH premises its premium offer of PHP20.1 billion. On June 26, OIDI filed a formal notice of appeal to the Office of the President against the decision of DPWH to disqualify it from the bidding.

The disqualification has triggered a big debate given the PHP8.45-billion difference between the offer of OIDI and Team Orion. Some said the disqualification was based on a flimsy technicality, given that ANZ had already clarified the effectivity of the bid security and an invoice was submitted to prove that OIDI had paid for a premium of 180 days and not 176. Others said the DPWH was only following the implementing rules and regulations of the revised BOT (Build-Operate-Transfer) Law. The posting of the bid security is for the purpose of guaranteeing that the proposed contract awardee will enter into a contract with the concerned agency within the time prescribed by the rules. Those who had sought OIDI's disqualification said the provision on rejection of bids (Section 7.5) under the implementing rules of the BOT had specifically stated that incomplete information on any of the envelopes and/or non-compliance with the bid security requirements shall be grounds for automatic rejection of bids. They said it's a "pass or fail" process of screening that leaves no room for any error.

As reported by Doris Dumlao and Miguel R. Camus, July 8, 2014
ppp.gov.ph › Services › Knowledge Management › PPP in the News (accessed September 20, 2015)

Improving public-private partnerships. The country has taken serious steps to improve the implementation of PPP infrastructure projects. Its efforts has been recognized by The Economist Intelligence Unit, which gave it a score much higher than other developing countries

in a comparison of PPP implementationi in the Asia Pacific region. Classified as an emerging country in the 2011 study done by The Economist Intelligence Unit, the Philippines has joined the developed group of countries in the 2014 study. The study's developed PPP market group includes the Republic of Korea, Japan, India, and the Philippines (**Table 7**).

Table 7: 2014 Infrascope: Overall Score Rank 2014		Score 2014	Score 2011	Rank 2011	Rank change
1	Australia	91.8	92.3	1	=
2	United Kingdom	88.1	89.7	2	=
3	Republic of Korea	78.8	71.3	3	=
4	Japan	75.8	63.7	6	+2
5	India	70.3	64.8	5	=
6	India—Gujarat state	68.0	67.6	4	+2
7	Philippines	64.6	47.1	8	+1
8	People's Republic of China	55.9	49.8	7	-1
9	Indonesia	53.5	46.1	9	=
10	Thailand	50.4	45.3	10	=
11	Pakistan—Sindh province	49.9	n/a	n/a	n/a
12	Bangladesh	49.3	39.2	11	-1
13	Kazakhstan	41.4	34.3	13	=
14	Pakistan	41.0	38.8	12	-2
15	Mongolia	39.7	23.3	15	=
16	Armenia	38.0	n/a	n/a	n/a
17	Papua New Guinea	33.5	20.8	16	-1
18	Viet Nam	33.1	26.3	14	-4
19	Kyrgyz Republic	29.5	n/a	n/a	n/a
20	Tajikistan	28.7	n/a	n/a	n/a
21	Georgia	26.2	n/a	n/a	n/a

Note: Changes in rank have been captured for the 16 jurisdictions that were also included in the 2011 Infrascope. Changes in rank to jurisdictions not included in the previous study are marked in the table as not applicable (n/a).

Source: The Economist Intelligence Unit, 2014. Evaluating the environment for publicprivate partnerships in Asia-Pacific, The 2014 Infrascope

According to The Economist Intelligence Unit 2014 Infrascope, "countries classified as developed PPP markets possess accommodating institutional and regulatory frameworks, but lack the sophistication of the mature countries in managing the many challenges bought about by PPP programmes, such as technical capacity, effective dispute resolution mechanisms, the adoption of viability gap funding (VGF) policies and appropriate standards for contingent liability accounting" (, The Economist, 2015, page 8) [vi]. Australia and the United Kingdom are classified as mature PPP markets. The same study described the Philippines as having "recorded the most-improved regulatory and institutional frameworks and is one of the leading countriesin the study for improved investment climate and financial facilities" (The Economist, 2015, page 10).

Public-private partnerships could indeed be a viable solution for finding long-term private finance and bringing private sector managerial and technical capabilities to bear on infrastructure projects. There is a need to develop capacity in mobilizing long-term private finance and in using more effectively public-private partnerships for infrastructure provision. Policymakers should understand that infrastructure is a lumpy investment requiring large long-term capital that could be sourced from private investors. Private capital seeks good returns and minimal risks as well. One particular barrier is the limitation on equity participation imposed by the Constitution on investment in public utilities[vii]. Private capital seeking to make substantial investments in infrastructure normally would also require a similar substantial equity position in the company that will implement infrastructure or manage infrastructure services. This is normal, expected behavior on the part of private risk takers. The country has also to develop better alternative dispute resolution mechanisms in view of several controversies affecting the bid and award stages of those projects. A basic requirement is guaranteeing right-of-way and facilitating talks with local governments in the matter of the taxation of real property and providing business permit. Under the Local Government Code, real property taxation and local business permits are major sources of revenue for local governments. Right-of-way issues have been the bane of many public projects.

Improving policy coordination and absorptive capacity. The Philippines has the Department of Transportation and Communication (DOTC) and the Department of Public Works and Highways (DPWH) as the main government departments responsible for providing infrastructure, They are complemented by several government owned and controlled corporations (GOCCs) such as the Light Rail Transport Authority, Philippine National Railways, Philippine Ports Authority (PPA), Local Water Utilities Administration. At the local level are local government units (composed of provinces, cities, and municipalities), which are in charge of devolved local roads and bridges, and municipal ports. These governmental bodies have varying absorptive capacity, which says that infrastructure provision is not just a matter of finding substantial funding but perhaps, first and foremost, about the capacity of those bodies to efficiently discharge their assigned functions. For example, there is low capacity in many of those local governments for infrastructure investment preparation and implementation (World Bank, 2005).

Coordination between oversight agencies (Departments of Finance, Budget and Management, and the National Economic and Development Authority) with such a diverse number of governmental bodies could be problematic and indeed such complex structure is breeding ground for inefficiencies and even corruption, if not properly monitored and checked. To compound the situation, some GOCCs also have regulatory functions in addition to their function to provide infrastructure, as in the case of PPA, which owns, operates and regulates ports assigned to private service providers. The World Bank (2005) believes that because of the conflict of interest arising from this, tariff charges as established by PPA are not aligned with the actual costs of usage of port facilities. This impacts on cost recovery and decision to invest in the affected ports.

Building disaster-resilient infrastructure. There has been global and local concern with the need to build disaster-resilient infrastructure in the wake of the impact of large natural disasters such as super Typhoon Haiyan in November 2013 (**Table 8**). The losses in terms of lives are immeasurable, and in terms of physical infrastructure, quite a setback especially for an infrastructure-constrained country such as the Philippines. The country could not afford the 'business-as-usual' approach of just rebuilding damaged structures during a post-disaster period, only to find those same structures destroyed by perrenial floods and typhoons, not to mention the occasional earthquakes. The government has announced that it will follow the principle of "Build Back Better," which means building disaster-resilient infrastructure. It needs both technical and financial help to achieve this ambitious target.

Table 8. Estimated Damages and Losses, Infrastructure Sector

Sector	Damage and Loss (PHP million)				
	Damage		Loss		Total
	Public	Private	Public	Private	
Infrastructure sectors	**16,024.30**	**4,285.00**	**7,108.40**	**6,565.40**	**33,983.00**
Electricity	5,329.30	1,500.00	4,575.20	4,126.40	15,530.90
Roads, bridges, flood control and public buildings	4,255.20	-	322.9	-	4,578.10
Ports and airports	6,010.80	216	24.3	-	6,251.10
Water and sanitation	429	2,569.00	2,186.00	2,439.00	7,623.00

Source: NEDA. 2013. Reconstruction Assistance on Yolanda (RAY) Plan. The local name for typhoon Haiyan was Yolanda.

Build Back Better aims to ensure the rehabilitation of structurally sound buildings that are capable of withstanding calamities and protecting families and communities during times of disaster. A BBB Operations Manual has been produced produced by Australian Volunteers for International Development in collaboration with the Department of the Interior and Local Government (DILG)[viii]. The government should tap the expertise of other donors such as the Japanese Government, which has demonstrated remarkable capacity in building disaster-resilient structures. PwC (2013) described how the city of Sendai rebounded quickly from the disastrous effects of tsunami triggered by a 9.0 magnitude which struck northeaster Japan's Tohuku region in March 2011. Sendai was the closest major city to the earthquake's epicenter. By March 2012, Sendai's post-disaster reconstruction had led to an economic upswing, with the construction industry, auto industry, retail sales, and hospitality, rising from disaster.

V. Conclusion and Policy Suggestions

Connectivity is a function of geography and it is a major challenge for the Philippines, an archipelago of 7,107 islands. Stronger external and inter-island connectivity will enable the country to take advantage of trade, investment, and growth opportunities in the dynamic East Asia region, thereby fostering the inclusiveness of growth. The Philippines is slowly gaining ground in filling the infrastructure gaps but it is obvious that much more substantial effort should be done. It needs to substantially increase its tax effort and avoid revenue-eroding tax measures, given its large spending priorities in social and physical infrastructure. There has been some improvement in the governance of infrastructure provision and using PPPs as an instrument to procure infrastructure services. It has to continously improve various elements of the governance framework especially the stability and predictability of policies and regulations. Better coordination among a diverse set of governmental bodies involved in infrastructure and also between government and the private sector is needed to address bottlenecks especially in complex PPP arrangements,

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[i] Philippine Instititute for Development Studies. The author thanks Ma. Kristina Ortiz for her assistance with the data reported in Section 2 of the paper.

[ii] http://ppp.gov.ph/wp-content/uploads/2015/09/PPP-Projects-Pipeline-Chart_11Sept2015.pdf

[iii] "PPP infra draws P300B in private funds- DPWH" BusinessWorld, September 17, 2015, page 4.

[iv] "Sanctity of contracts," an editorial of the Philippine Daily Inquirer, September 15, 2015

[v] "Sanctity of contracts," an editorial of the Philippine Daily Inquirer, September 15, 2015

[vi] The 2014 Infrascope is a snapshot and evaluates each country as of December 2014, providing a comprehensive summary of laws, regulations and practices up to that date (The Economist Intelligence Unit).

[vii] Section 11 Article XII of the 1987 Constitution prescribes the Filipinization of public utilities by granting the authority to operate a public utility only to citizens of the Philippines or a corporation that has at least 60 percent of its capital owned by such citizens. The term "public utility" refers to a business that regularly supplies the public with a commodity or service of public consequence, such as electricity, gas, water transportation, telephone or telegraph service. Source: Pamela Palad, "The Filipinization of public utilities" http://www.punongbayan-araullo.com/pnawebsite/pnahome.nsf/section_docs/VF028R_2-8-11, (Date accessed September 20, 2015)

[viii] http://www.gov.ph/2015/08/25/newly-released-build-back-better-manual-aims-to-strengthen-post-disaster-relief-efforts/