

Infrastructure Development and Investment in the APEC Region

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Infrastructure Development in the APEC Region

There are growing infrastructure needs in the APEC region as their economies have expanded.¹ However, both developing and developed economies face infrastructure gaps² because of the mismatch between infrastructure demands and sup-

plies. Developing countries require developing and constructing new infrastructure capacities. In developed countries, however, it is more important to maintain existing infrastructure and replace time-worn infrastructure than to develop new ones.

¹ APEC (2011), "Filling the Infrastructure Gaps in the APEC's Developing Economies," p. 16.

² Infrastructure gap means the mismatch between infrastructure investment needs and infrastructure development finance mobilization. That is, infrastructure gap is derived from the gap among the investment sources of demand and supply.

In most of the APEC member economies, electricity production and electricity consumption per capita in 2010 have increased compared to those of 1990. However, 800 million people in Asia still have no access to basic electricity services.³ In addition, electricity-related infrastructure should be expanded to meet the increased demands brought about by economic growth, population growth and industrialization.

Transportation infrastructure has also been improved compared to that of 1990. In general, total road networks, road density, percentage of paved roads, and total rail route have been expanded and increased. However, the expanded infrastructure is still not sufficient to be able to satisfy the basic infrastructure needs in most developing countries because the initial infrastructure was very poor. In addition, emerging economies, such as China, Russia, and Indonesia, also have to enlarge transport infrastructure capacity to satisfy the demands derived from expansion of economy and to pursue sustainable development.

Telecommunication and ICT infrastructure also ought to be enlarged even if the number of fixed broadband and mobile cellphone subscribers increased for the period 2000–2012. This is because the number of subscriptions of fixed broadband Internet in developing countries is less than 20 out of 100 and thus, the demands for it will continue to increase. Furthermore, as the penetration rates of smartphones and tablet PCs increase, infrastructure related to wireless Internet networks need to be additionally constructed as well.

As shown in Table 1, Asia's infrastructure needs amount to approximately USD 8.22 trillion during the period 2010–2020 according to ADB's estimation. This means USD 800 billion are needed annually to meet the investment demands of the region.⁴ Around 68% of them are required for newly constructed infrastructure and the remaining 32% are required for maintenance or replacement of existing infrastructure.⁵ However, half of the total infrastructure investment demands in Asia come from China.

The infrastructure needs in East and Southeast Asia, where a lot of APEC member economies are included, are the highest among Asia region. This is because infrastructure demands of emerging economies, such as China and Indonesia are growing as their scales of economy become larger and larger. Figure 1 represents the infrastructure investment demands of East and Southeast Asia as a percentage of the estimated GDP by sector for the period 2010–2020. Total infrastructure investment needs account for 5.54% of the estimated GDP. Electricity-related infrastructure investments are mostly needed throughout the region and this is followed by transportation, telecommunications and water and sanitation.

³ Kim, G. (2011), "Key Challenges and Role of ADB in Infrastructure", Paper Presented in the Conference on Infrastructure Growth and Poverty Reduction, 14-15 April, ADB Headquarters, Manila. Recitation: Brooks and Go (2011), "Infrastructure's Role in Sustaining Asia's Growth," ADB Working Paper, p. 2.

⁴ ADB (2012), *Infrastructure for Asian Connectivity*, p. 32.

⁵ *Ibid.*

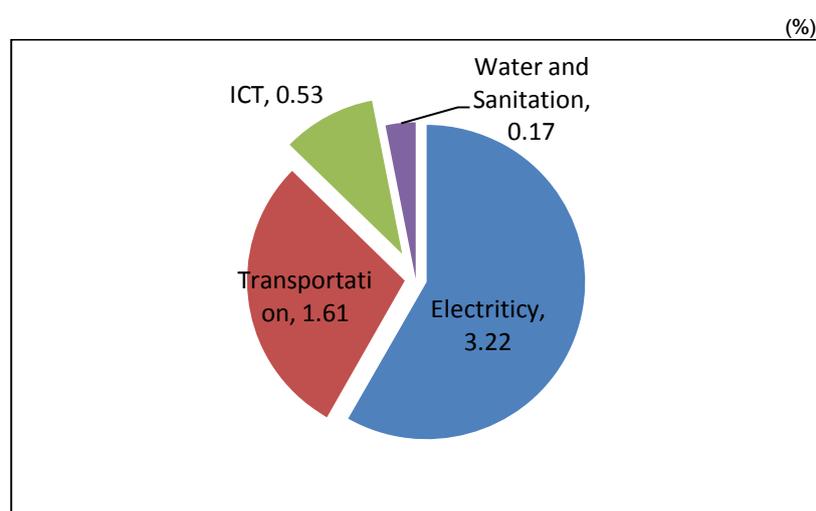
Table 1. Asia's Infrastructure Needs by Region, 2010–2020

(2008 USD million)

	Total investment needs (%)	Estimated investment needs	Investments as % of total	
			New capacity (%)	Maintenance (%)
East and Southeast Asia	66.553	5,472,327	71	29
China	53.118	4,367,642	72	28
Mongolia	0.122	10,069	37	63
Malaysia	2.287	188,084	79	21
Thailand	2.103	172,907	72	28
Indonesia	5.476	450,304	70	30
Philippines	1.546	127,122	53	47
Lao Republic	0.138	11,375	56	44
Myanmar	0.264	21,689	56	44
Cambodia	0.163	13,364	51	49
Viet Nam	1.335	109,761	53	47
Central Asia	4.544	373,657	54	46
South Asia	28.829	2,370,497	63	37
The Pacific	0.073	6,023	30	70
Total of Asia	100	8,222,503	68	32

Source: ADB (2012), Infrastructure for Asian Connectivity, p. 33-34.

Figure 1. East and Southeast Asia's Infrastructure Investment Needs as a percentage of the Estimated GDP by Sector, 2010-2020



Source: ADB(2012), Infrastructure for Asian Connectivity, p. 38

Multi-Year Plan on Infrastructure Development and Investment

Infrastructure development and investment have direct and indirect impacts on the economic growth and poverty reduction. Thus, international communities, including APEC, pay attention to the issue. In line with this, they have shared that it is important to pursue economic growth through infrastructure development and investment and connectivity across regions. As the public finance is not enough to back up all infrastructure investment needs after the financial crisis, they also try to work out measures to increase private sector participation and to mobilize private finance.

APEC member countries and stakeholders have been discussing the infrastructure development and investment, financing mobilization, and measures to promote private investment including Public-Private Partnerships (PPP). In 2010, Economic Leaders discussed the role of APEC to promote economic growth through infrastructure development by sharing best practices relating to PPP projects, and providing innovative solutions, technical assistance, and advisory services to extend the mobilization of both private and public finance. In 2011, the Finance Ministers emphasized that the increase in infrastructure investment and improvement of service will play a key role in achieving economic recovery and sustainable economic growth in the Asia-Pacific region. Moreover, they shared opinions on expanding private financing mobilization through consultation with market participants in the infrastructure capital mobilization market. In 2012, Economic Leaders perceived that private investment plays an important role in regional infrastructure construction and recommended to implement the much broader

project by taking advantage of PPP.

In 2013, the APEC discussion on Infrastructure Investment and Development has begun in earnest. Indonesia, the chair of APEC 2013, suggested the Multi-Year Plan on Infrastructure Development and Investment (MYPIDI), and the plan was approved as a part of the annexes to the 21st Leaders' Declaration.⁶ The development of physical infrastructure such as cross-border transportation does not only reinforce the connectivity between the regions, but it also improves the supply chain connectivity. This could realize the Bogor Goals, committed to achieve the free and open trade and investment facilitation within the Asia-Pacific region until 2020 by further reducing barriers to trade and investment and by promoting the free flow of goods, services, and capital.⁷

The initial period of MYPIDI is from 2013 to 2016 and the plan suggested four workstreams which could provide guidance on infrastructure development and investment. APEC member economies will build a proper institutional environment to maximize the participation of the private sector in the infrastructure sector through MYPIDI. The four workstreams are as follows:

1. Fostering a business-friendly environment for infrastructure development and investment through a solid regulatory framework, that minimizes uncertainty and maximizes transparency and predictability

⁶ Economic Leaders also approved the "APEC Framework on Connectivity," which tries to strengthen physical connectivity, institutional connectivity, and people-to-people connectivity. Infrastructure development is related to physical connectivity.

⁷ <http://www.apec.org/About-Us/About-APEC/Achievements-and-Benefits/Bogor-Goals.aspx> (accessed October 15, 2013)

2. Development and refinement of an Integrated planning system mechanisms
3. Development of the government's capacity to identify and generate a pipeline of bankable infrastructure projects
4. Development or further improvement of the financing and funding environment to encourage long-term investors

The first activity under the Multi-Year Plan is to establish a pilot PPP center within the Ministry of Finance of Indonesia. The objectives of the establishment of the center are to identify the pipelines of bankable infrastructure PPP projects and coordinate the opinions among stakeholders at the national level. In addition, APEC PPP Expert Advisory Panel will be established to support Indonesia for setting the PPP center up and also play a key role to provide technical assistance to developing countries.

Policy implications for Korea

The MYPIDI is expected to reduce the development gap within the region and reduce poverty considerably as it contains important suggestions to overcome the impediment to boost private sector participation in infrastructure investment. Thus, Korea should actively participate in the discussions on the MYPIDI and infrastructure development and investment based on the experiences to draw Seoul Development Consensus, which contains infrastructure-related agendas. Principally, Korea has plenty of experiences relating to PPP and infrastructure development and investment, which acted as a base for economic growth. In addition, Korea has a well-organized legal and

institutional foundation for PPP. These advantages guarantee that Korea will be able to offer its suggestions for facilitating private sector participation and setting up further action plans under the MYPIDI.

Korea can strengthen developing countries' capacities related to infrastructure development through traditional ODA programs or Knowledge Sharing Programs (KSPs). As APEC requested for support and cooperation from various nations and institutions to assist the pilot PPP center in Indonesia and APEC PPP Expert Advisory Panel, Korea could offer technical assistance activities based on its experiences of operating the PPP center. For example, Korea can provide educational programs to officials from developing countries through Asia Public-Private Partnership Practitioners' Network (APN) operated by both Korea Development Institution's (KDI) Public and Private Infrastructure Investment Management Center (PIMAC) and the World Bank.

Lastly, Korea should review next year's discussions on infrastructure in advance because the further action plans under MYPIDI will be discussed at the 1st Senior Official Meeting and Finance and Central Bank Deputies' Meeting. Moreover, since China, next year's APEC Chair, is highly interested in infrastructure development and investment, it has suggested diverse cooperation measures, such as the East Asia Infrastructure Partnership Forum, East Asia Infrastructure Investment Banks, and East Asia Infrastructure Fund in the various international discussions. Therefore, Korea ought to review China's suggestions on infrastructure investment in advance to respond to next year's APEC meetings and discussions.

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