

Infrastructure Financing Challenges in Southeast Asia

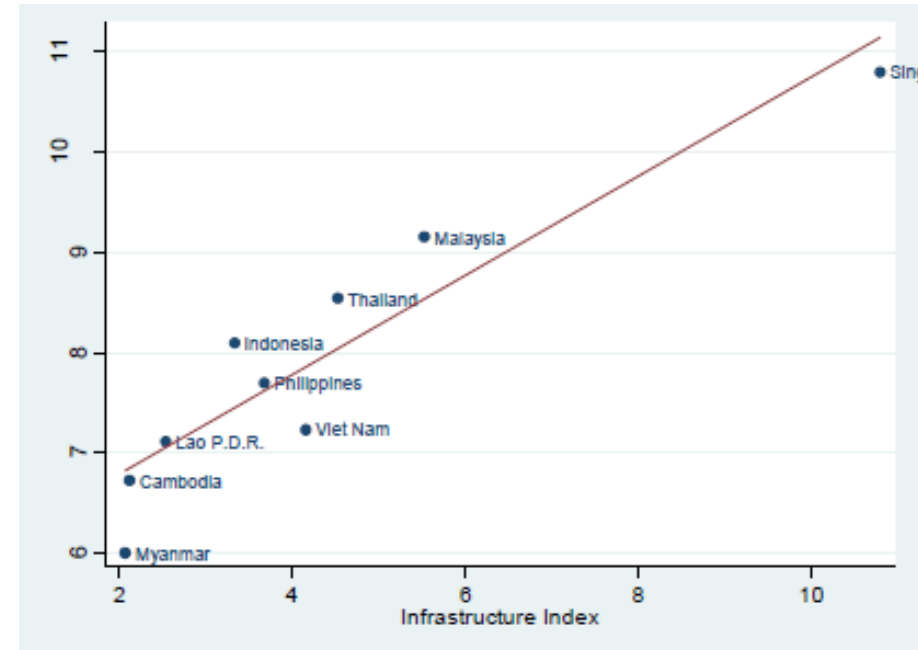
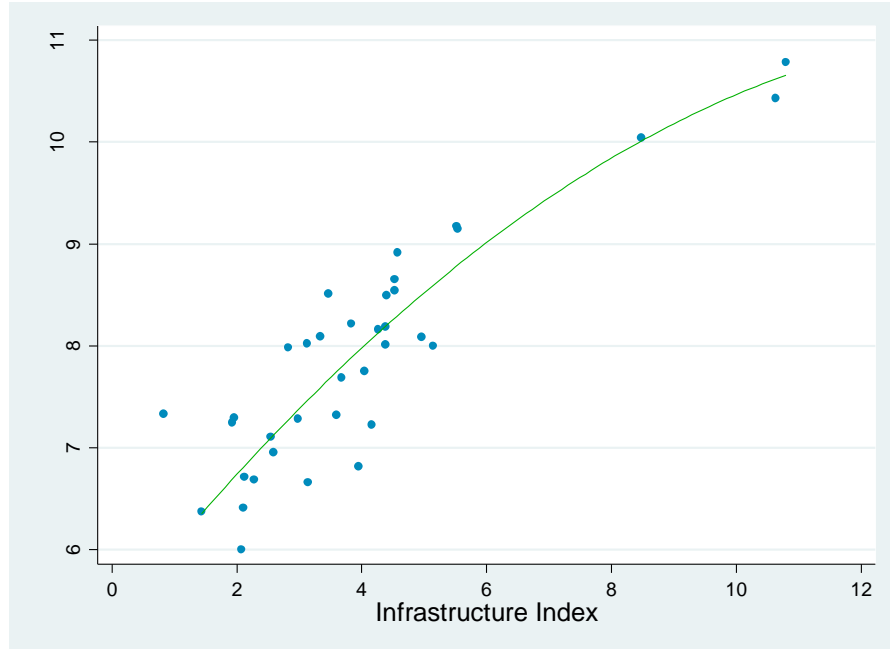
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Asian Development Bank

Policy Dialogue on
Infrastructure Financing Strategies for Southeast Asia

Manila, 29 August 2017

Infrastructure is still critical to Asia

Infrastructure and GDP per capita

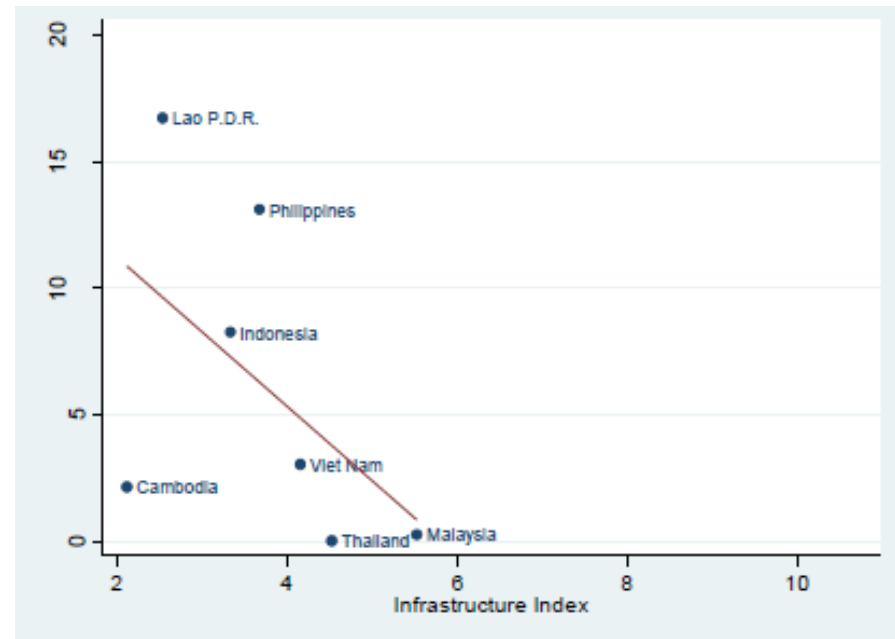
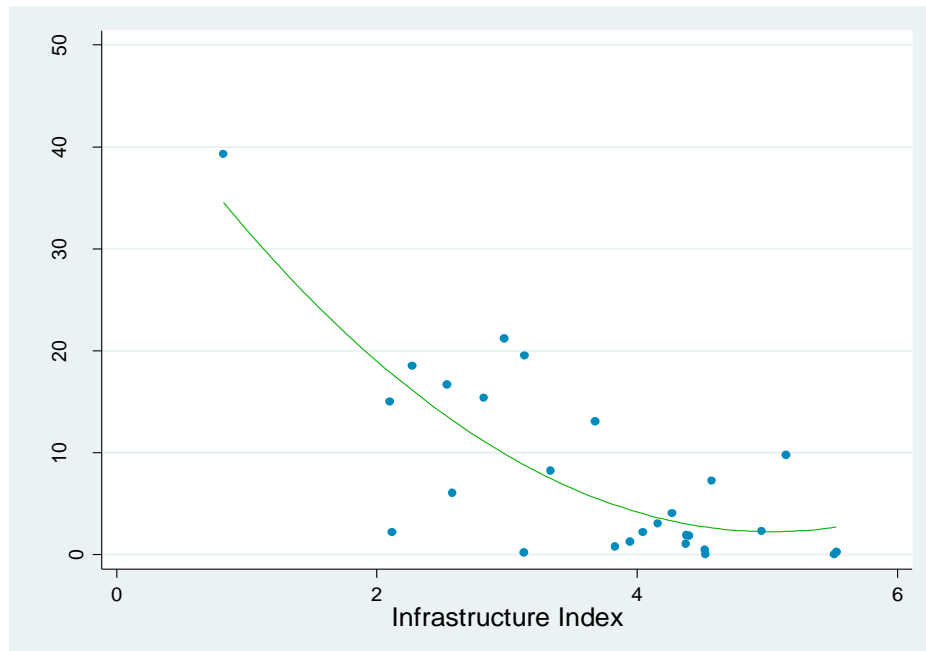


Note: Infrastructure index is computed based on first principal component of infrastructure stocks in roads, airport, electricity, telephone, mobile, broadband, water and sanitation. Higher values represent greater infrastructure availability.

Source: ADB estimates based on data from World Development Indicators and PovcalNet, World Bank

Infrastructure is still critical to Asia

Infrastructure and poverty

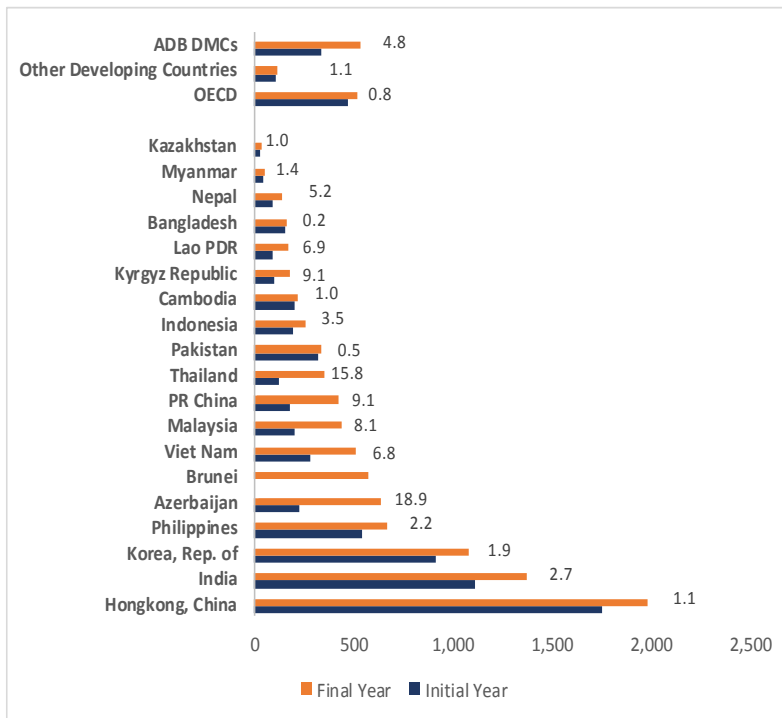


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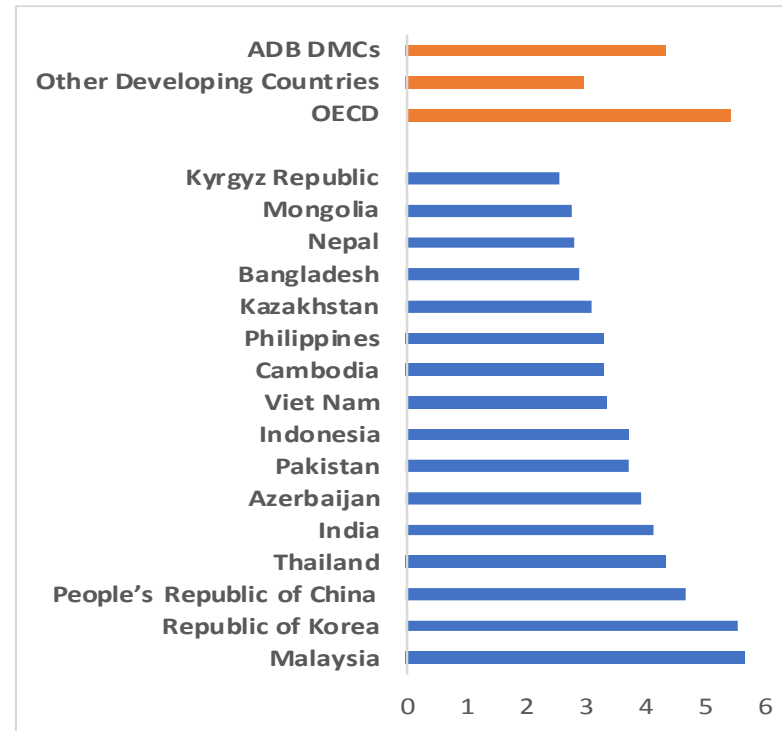
Asia surpassed other developing countries in infrastructure provision

Road Density and Annual Growth



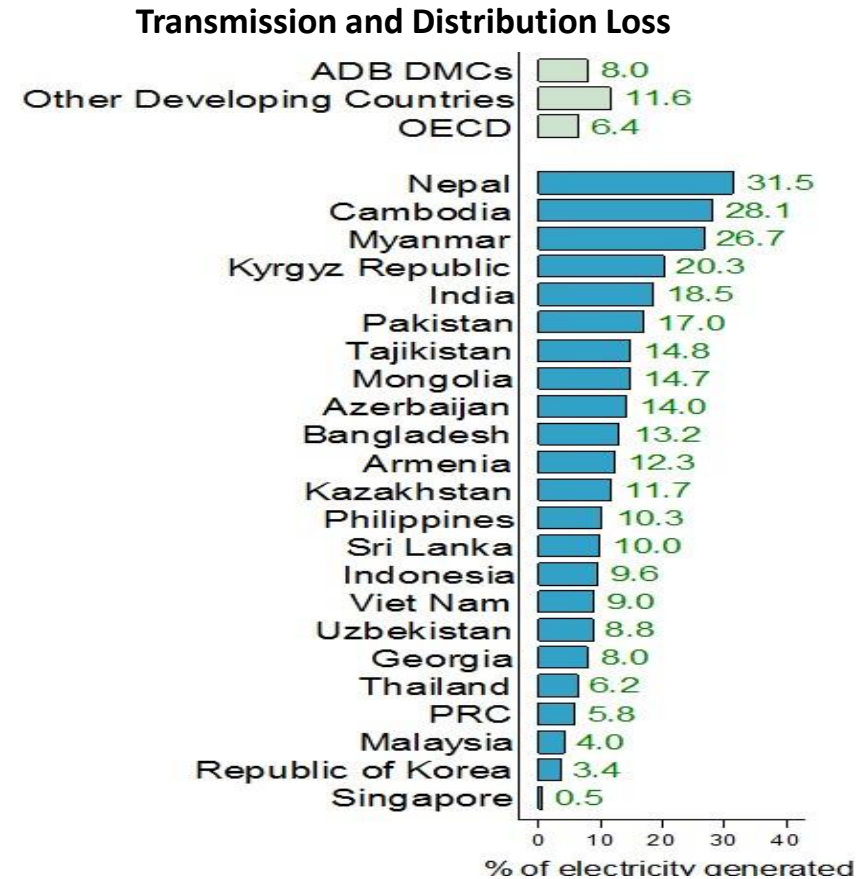
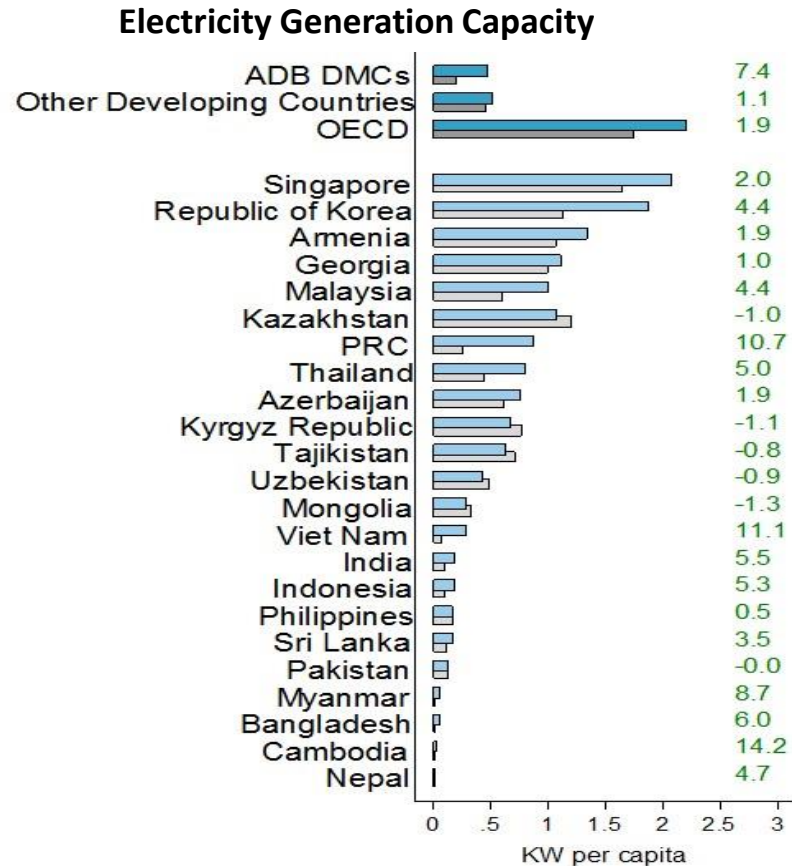
Figures refer to annualized growth rate (2000-2010). Initial year is between 1996-2004 while Final Year is between 2006-2010.
 Regional averages are calculated with land area as weights
 Source: International Road Federation (2012); World Development Indicators, World Bank

Road Quality, 2015



Regional averages of quality are calculated with length of road as weights
 Source: World Economic Forum
 Cited in *Meeting Asia's Infrastructure Needs*, ADB, 2017

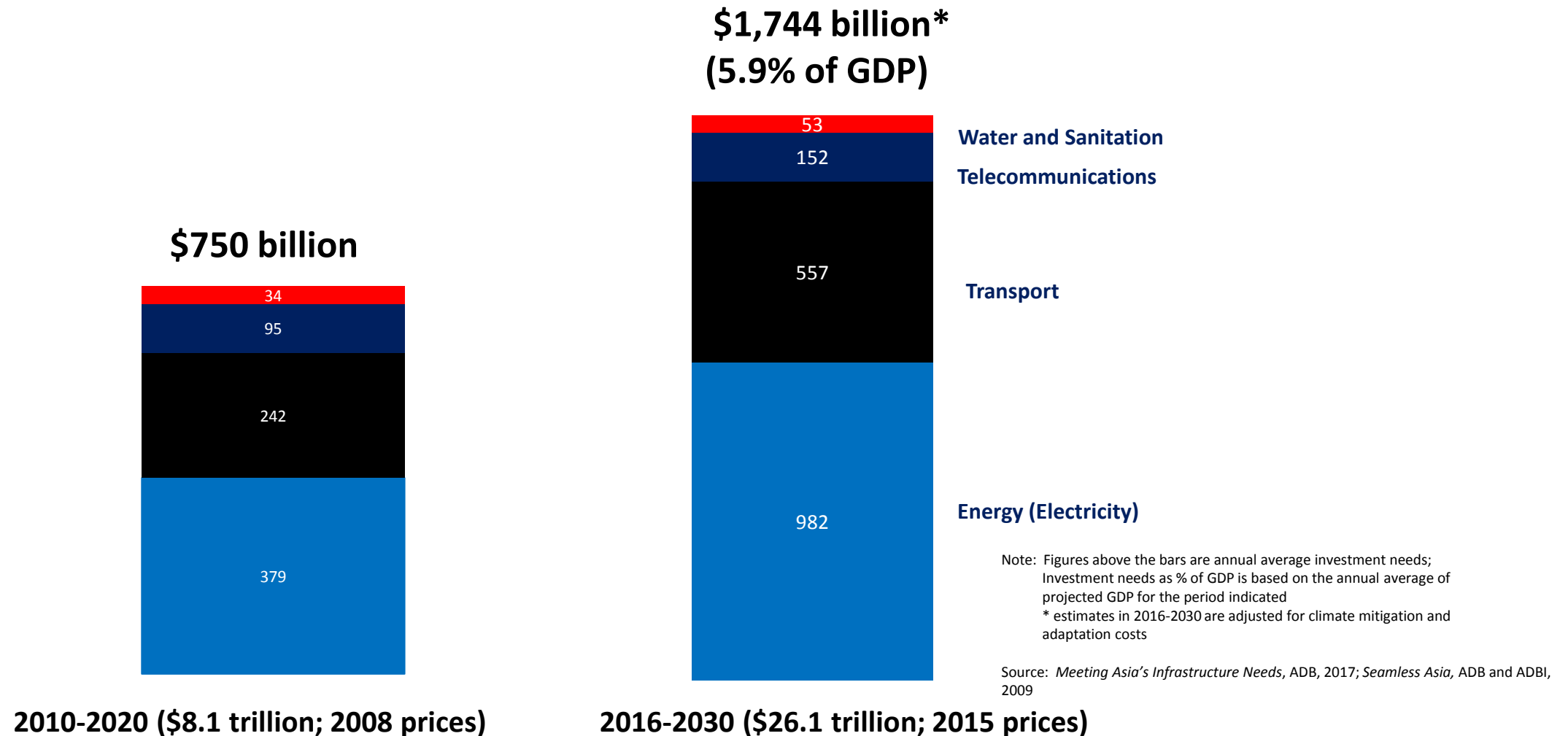
But more infrastructure is still needed



Figures refer to annualized growth rate (2000-2012).
 Regional averages are calculated with population as weights
 Source: International Energy Statistics, US Energy Information Administration
 Cited in *Meeting Asia's Infrastructure Needs*, ADB, 2017

Regional averages are calculated with total electricity generated as weights
 Source: World Bank Development Indicators, World Bank
 Cited in *Meeting Asia's Infrastructure Needs*, ADB, 2017

Key challenge: huge need for infrastructure investment in Asia



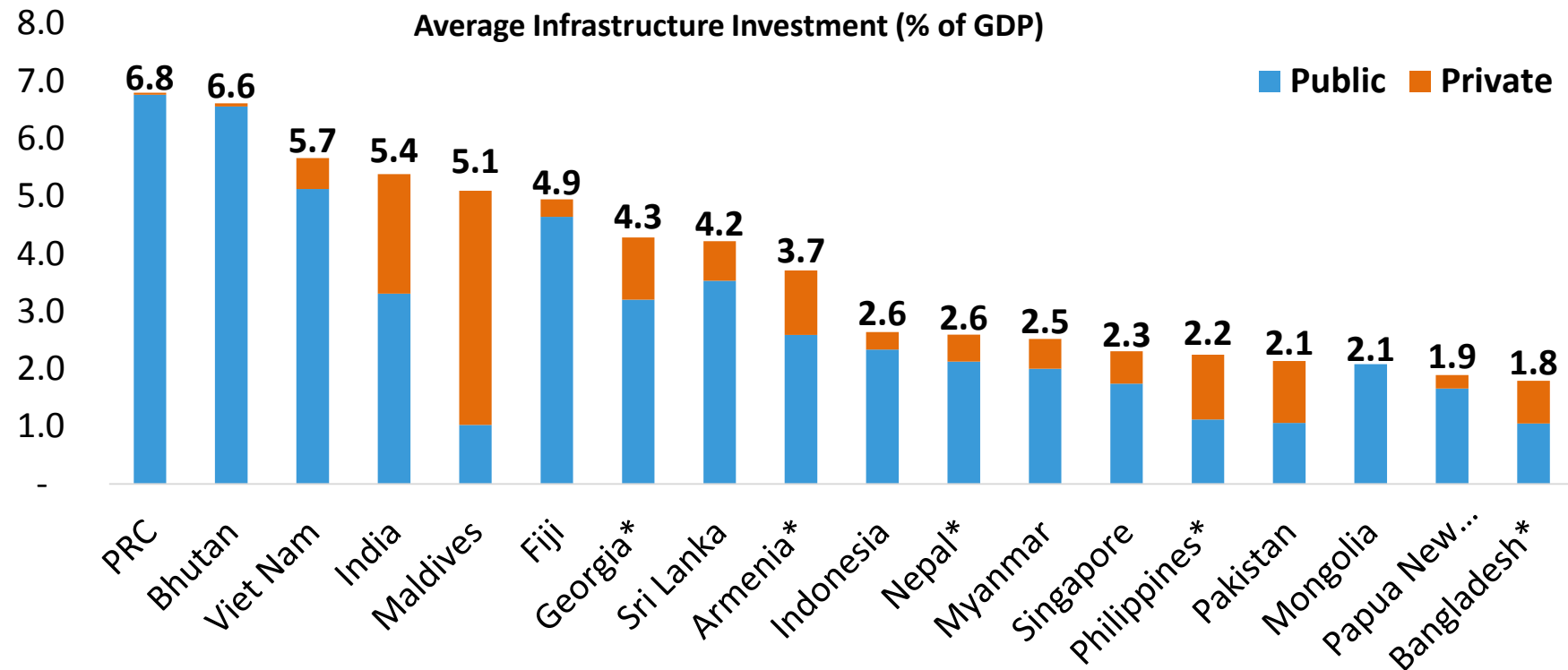
Infrastructure investment needs vary across sub-regions

Infrastructure Investment by Region: Asia and the Pacific 2016-2030 (\$ billion, 2015 prices)

Region	Baseline Estimates			Climate-adjusted Estimates **		
	Investment Needs	Annual Average	Investment Needs as % of GDP	Investment Needs	Annual Average	Investment Needs as % of GDP
Central Asia	492	33	6.8	565	38	7.8
East Asia	13,781	919	4.5	16,062	1,071	5.2
South Asia*	5,477	365	7.6	6,347	423	8.8
Southeast Asia	2,759	184	5.0	3,147	210	5.7
The Pacific	42	2.8	8.2	46	3.1	9.1
Asia and the Pacific	22,551	1,503	5.1	26,166	1,744	5.9

Note: Pakistan and Afghanistan are included in South Asia. *** Climate-adjusted estimates include climate mitigation and climate proofing costs, but not include other adaptation costs, especially those associated with sea level rise.

Investment in infrastructure: considerable variations by country



Note: Figures above bars are average infrastructure investment as % of GDP, computed for the period 2010-14

Public sector includes central government budget only. Actual budget investments except Armenia, Bhutan, Georgia, Maldives, Myanmar and Thailand, which are planned or estimated budget investments

Source: *Meeting Asia's Infrastructure Needs*, ADB, 2017

Infrastructure investment gaps – \$102 billion or 4.1% of GDP

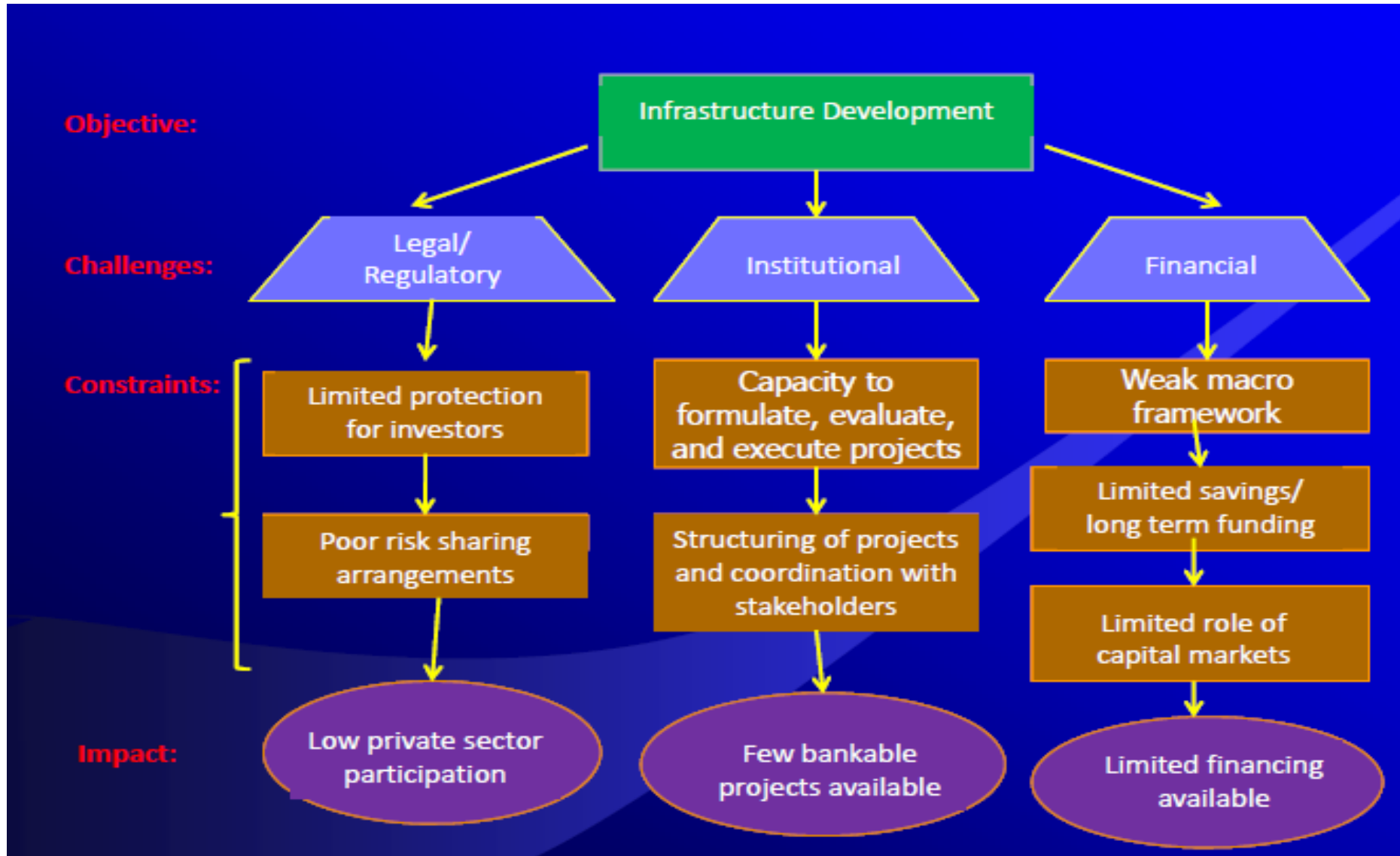
Infrastructure Investments and Gaps: Asia and the Pacific 2016-2020 (\$ billion, 2015 prices)

	Estimated Current Investment (2015)	Climate-adjusted Estimates		
		Annual Needs	Gap	Gap (% of GDP)
Total Asia-Pacific (25)	881	1,340	459	2.4
Total without PRC (24)	195	503	308	5.0
Selected Central Asia Countries (3)	6	12	7	3.1
Selected South Asia Countries (8)	134	329	195	5.7
Selected Southeast Asia Countries (7)	55	157	102	4.1
Selected Pacific Countries (5)	1	2	2	6.9

Note: Number in parentheses refer to number of countries. For example, the 7 Southeast Asian countries in the estimation include Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand and Viet Nam.

The gap as a % of GDP is based on the annual average of projected GDP from 2016 to 2020.

How to close the gaps?

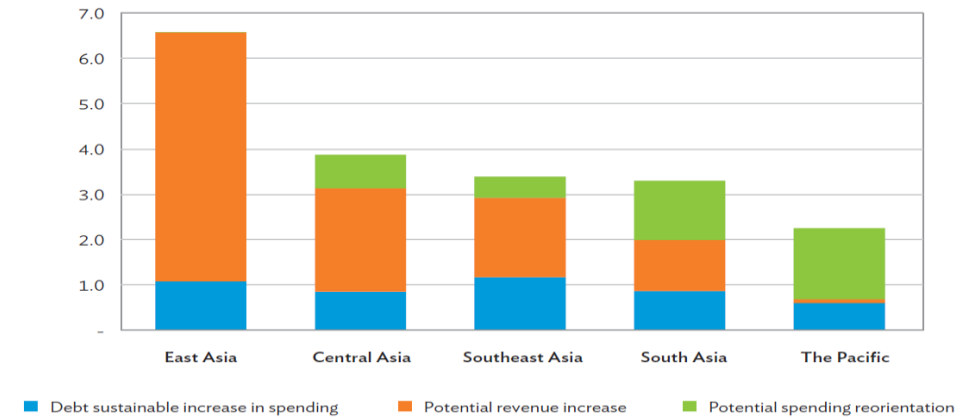


- Reforms
- Institutions
- Finance

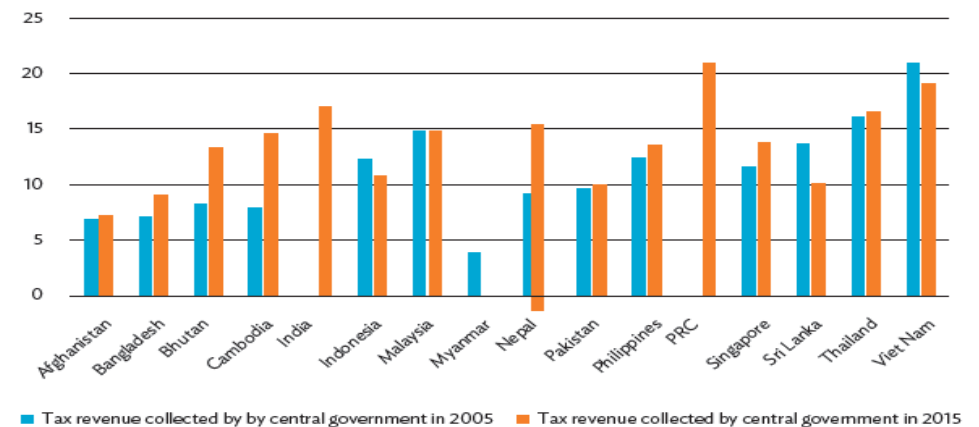
Reforms should continue

- **Fiscal reforms** to enhance sustainability of government finances and public infrastructure investments
- **Increase tax revenues** for capital spending
 - indicative targets: tax/GDP=18%
 - remove loopholes in tax system
 - good governance in tax collection
- **Manage current and future liabilities**
 - set annual budgets within medium-term fiscal frameworks
 - monitor regularly government liabilities

Fiscal space in developing Asia (% of GDP)



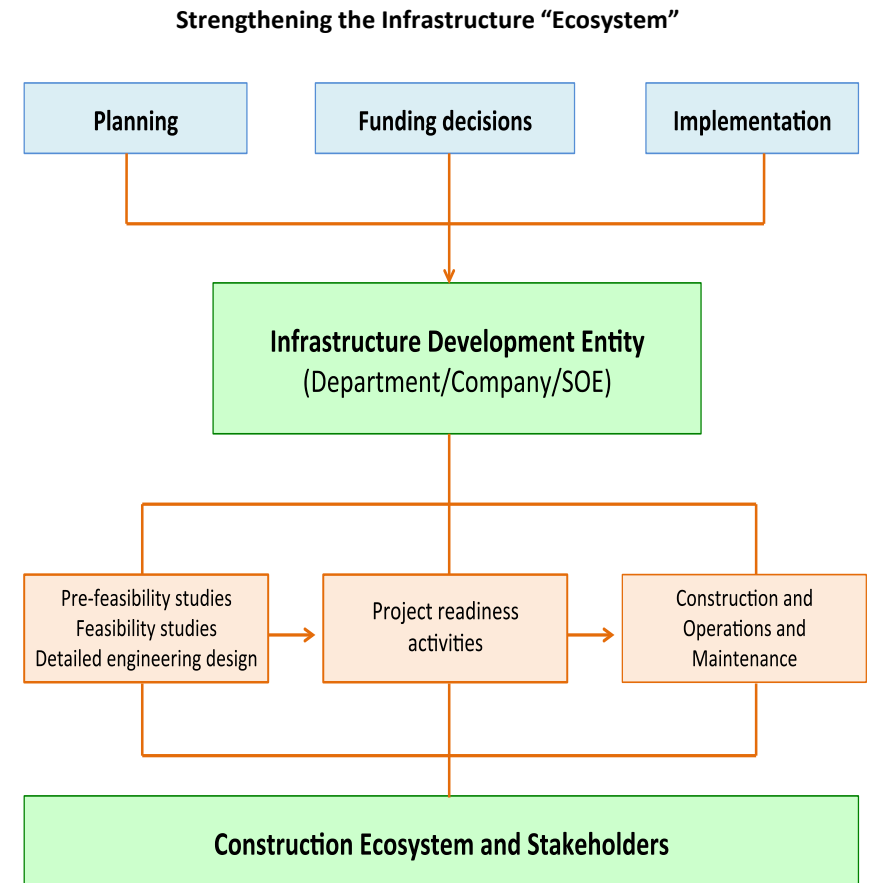
Tax revenues to GDP (%)



Source: *Meeting Asia's Infrastructure Needs*, ADB, 2017; Ahmad (2015); World Bank 2017

Institutional connectivity matters

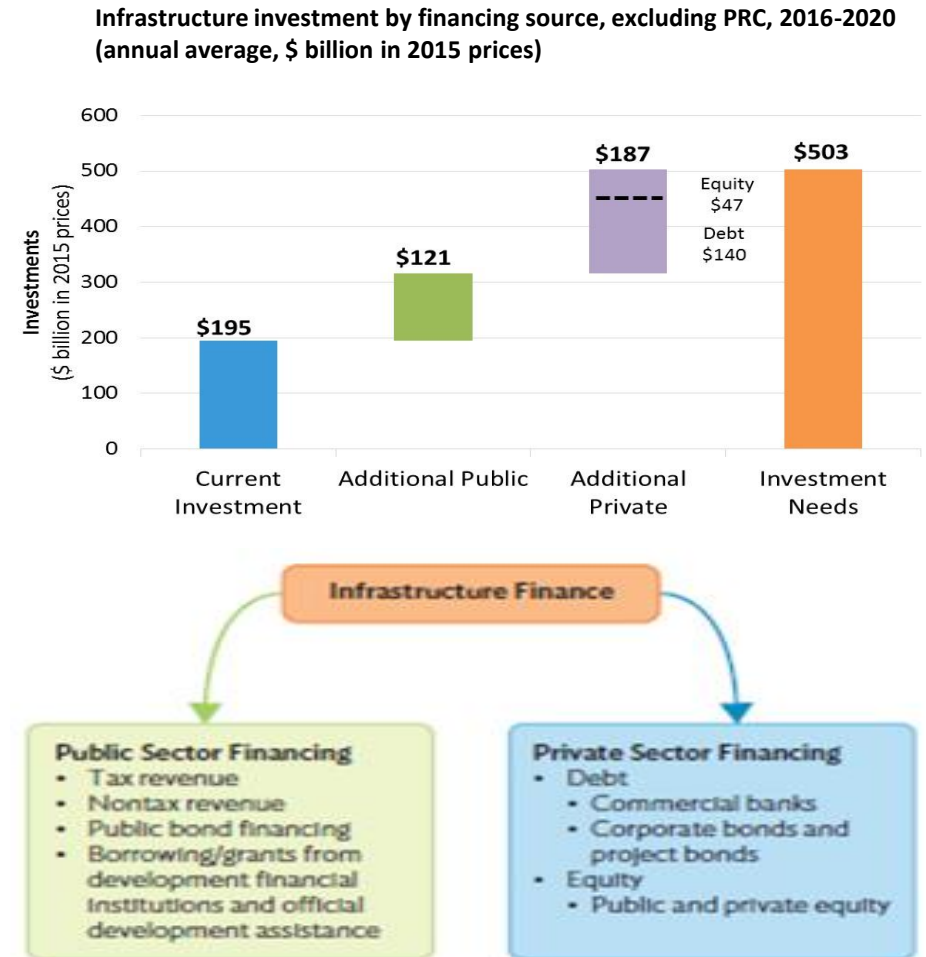
- Institutional connectivity refers to **effective policies and institutions** to enhance seamless connections, as critical as physical infrastructure
- Strengthen **domestic capacity and governance** to implement successful infrastructure projects:
 - legal frameworks
 - regulatory policies
 - policy environment
 - coordination among agencies/authorities
 - engagement with private sector to boost efficiency of infrastructure services
- Ability to **address border and behind-the-border barriers** to enhance cross-border collaboration infrastructure (e.g., harmonization of regulatory standards)



Source: *Meeting Asia's Infrastructure Needs*, ADB, 2017

Financing is still key

- Efficiency in **public financing**
 - direct fiscal support through capital spending
 - strong public support facilitates private capital financing
- Strengthen **private sector support** mechanisms
 - enhance efficiency of existing modes of private financing
 - making PPP work (i.e., transparency of projects; enforceable contracts)



Source: Meeting Asia's Infrastructure Needs, ADB, 2017

Conclusion

- Despite progress in infrastructure provision in the last decade, Southeast Asia needs \$3.1 trillion (in 2015 prices), or **\$210 billion per year**, for infrastructure investment in 2016-2030
- The aggregate figures mask **wide variations in infrastructure investment gap** across Southeast, and actual needs are likely to be higher than these estimates as more comprehensive infrastructure investment data is produced
- **Innovative solutions and reforms**, involving both public and private sectors, are needed to effectively utilize Asia's large savings for infrastructure development and bridge financing gaps
- But **to sustain infrastructure development, need to overcome obstacles**, including governance, capacity, and institutional issues in developing Asia

ASEAN Infrastructure Fund (AIF)

Why AIF?

Objective: Channel regional resources for long-term financing of regional infrastructure development

- Huge financing demand for infrastructure development
- Sizable regional savings and forex reserves

“If the wealth tied up in reserves were invested either domestically in infrastructure or in a fully diversified long-term way in global capital markets...this is comparable to the gains thought to be achievable from the next round of trade liberalization, to global foreign aid, or to spending on key social sectors in a number of countries.” —

Lawrence Summers, Reflections on Global Account Imbalances and Emerging Markets Reserve Accumulation, March 2006

AIF as an ASEAN Initiative

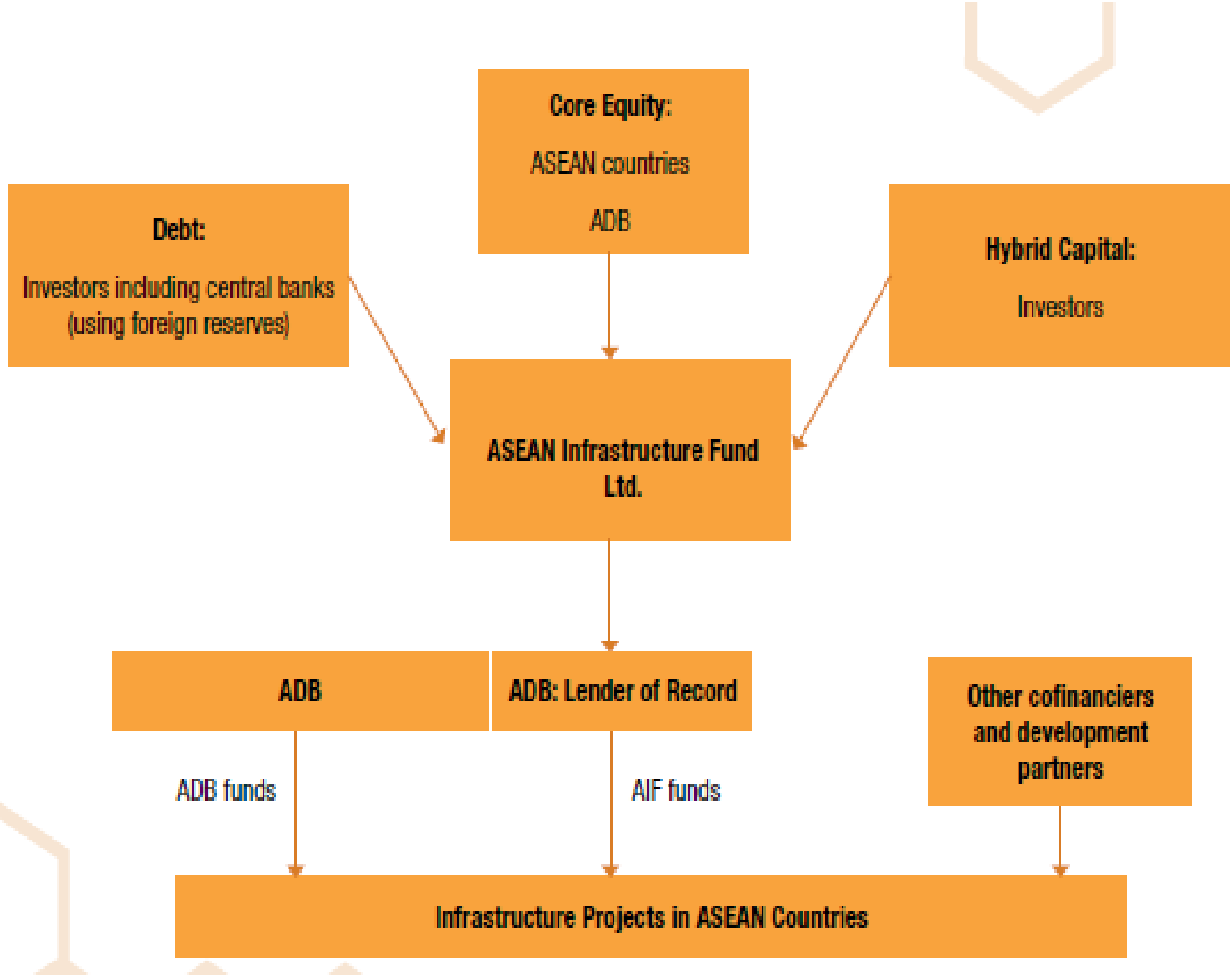
- In 2006, the ASEAN Finance Ministers called for the setting up of a fund to pool foreign exchange reserves to finance infrastructure development
- In 2009, ASEAN asked ADB to provide technical and financial support
- In 2011, the AIF Shareholders Agreement was signed
- In 2012, AIF was established as a corporate entity and was granted exemptions from taxes and foreign exchange controls.

AIF Governance

- All 10 ASEAN member-states and ADB are AIF shareholders; All equity fully paid between 2012-2015
- All Shareholders are represented in the Board
- Board Chairmanship is every two years; Malaysia is current chair
- Fully administered by ADB
- Two Board meetings held every year: (in May at ADB Headquarters and in November in country of incumbent ASEAN Chair; For 2017: Philippines)

AIF Equity structure

	(\$million)
ASEAN	335.2
Brunei Darussalam	10.0
Cambodia	0.1
Indonesia	120.0
Lao PDR	0.1
Malaysia	150.0
Myanmar	0.1
Philippines	15.0
Singapore	15.0
Thailand	15.0
Viet Nam	15.0
ADB	150
TOTAL	485.2



The Role of ADB

- ADB has three important roles:
 - (i) Shareholder: ADB provided \$150 million equity
 - (ii) Administrator: ADB formed an inter-departmental working group to support AIF administration
 - (iii) Cofinancier: ADB provided cofinancing of \$2,089 million to all 8 AIF projects;
- All relevant ADB policies apply to AIF operations & administration

AIF Projects

(as of end-May 2017)

Country	Project	AIF Funding (\$ million)
Indonesia	Java–Bali 500kV Power Transmission Crossing Project	25
Indonesia	Metropolitan Sanitation Management Investment Project	40
Viet Nam	Ha Noi and Ho Chi Minh City Power Grid Development Sector Project	100
Indonesia	Sustainable and Inclusive Energy Program	100
Myanmar	GMS East–West Economic Corridor Eindu to Kawkareik Road Improvement Project	20
Lao PDR	Second GMS Corridor Towns Development Project	10
Indonesia	Electricity Grid Strengthening – Sumatra Program	25
Indonesia	Integrated Participatory Development and Management of Irrigation Program	100
TOTAL		420

AIF Portfolio

By Sector	Amount (\$million)	Share (%)
Energy	250	59.52
Urban/Water	50	11.90
Transport	20	4.76
Others	100	23.81
TOTAL (actual)	420	100.00
By Country	Amount (\$million)	Share (%)
Indonesia	290	69.05
Viet Nam	100	23.81
Myanmar	20	4.76
Lao PDR	10	2.38
TOTAL	420	100.00

The AIF portfolio is expected to reach \$700 million by the end of 2017.

Concluding notes

- AIF fully operational...
- ... can and should grow significantly bigger to further support ASEAN infrastructure development



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