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**Roundtable on Asia's Policy Framework for Investment: Investing in a Stronger,
Cleaner, and Fairer Asian Economy**

INFRASTRUCTURE *for a*
SEAMLESS
ASIA

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A Joint Study of the Asian Development Bank and the Asian Development Bank Institute



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Outline

- Needs and Benefits of Infrastructure
- Infrastructure Investment
- Infrastructure, Competitiveness, and Growth
- Objectives of the Study
- Infrastructure Financing Needs 2010-2020
- Benefits of Seamless Asian Connectivity
- Institutions for Connectivity
- Conclusions

Need for Infrastructure

- The global crisis provides 6 reasons for increasing infrastructure investment in Asia:
 - I. Enhances competitiveness, productivity and economic recovery and help in sustaining growth in medium to long term
 - II. Increase standard of living and reduce poverty by connecting isolated places and people with major economic centers
 - III. Narrow development gap among Asian economies by connecting LDCs with large countries (such as PR China and India), markets and business centers
 - IV. Promotes environmental sustainability
 - V. Forms an important part of fiscal stimulus package to alleviate impact of crisis and acts as new engines of growth
 - VI. Helps in increasing regional demand and intraregional trade for rebalancing Asia's growth— through increased cross-border connectivity resulting in reduction of trade and logistics costs

Infrastructure Investment in Stimulus Packages of Major Asian Economies

(US\$ billion)

Country	2008 GDP ¹	Total Fiscal Stimulus	Total Stimulus as % of 2008 GDP	Infrastructure Component of Stimulus	Infrastructure Component as % of Total Stimulus	Infrastructure Component as % of 2008 GDP
PRC	4326.19	600	13.9%	275	45.8%	6.36%
India	1217.49	60	4.9%	33.5	55.8%	2.75%
Indonesia	514.39	7.7	1.5%	1.3	16.9%	0.25%
Viet Nam	90.70	8	8.8%	4.8	60.0%	5.29%
Thailand	260.70	46.7	17.9%	30.6	65.5%	11.74%
Malaysia	194.93	2	1.0%	0.17	8.5%	0.09%
Singapore	181.95	14.6	8.0%	3.1	21.2%	1.70%
Taipei, China	385.42 ²	20.4	5.3%	16.6	81.4%	4.31%
Japan	4909.27	130	2.6%	1.5 ³	1.2%	0.03%
Korea	929.12	11	1.2%	7.8	70.9%	0.84%
Australia	1015.22	9.7	1.0%	2.3	23.7%	0.23%

¹ In Current Prices

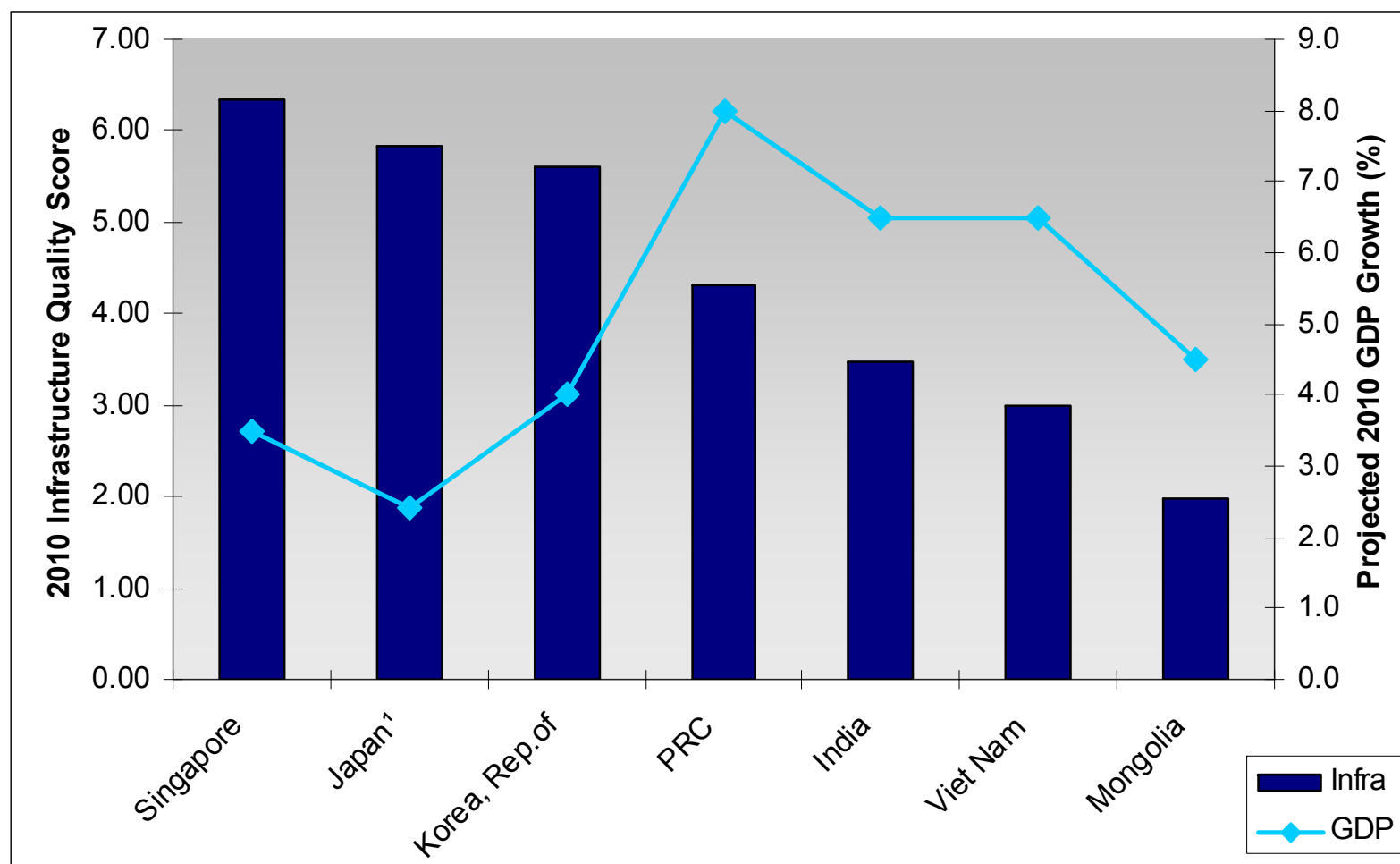
² Converted from New Taiwan Dollars to US\$ at exchange rate for 28 January 2010 of 1TWD= 0.03117US\$

³ Amount estimated from reports in FAITC (2009) and Sugimoto (2010)

Note: Exchange rates on 28 January 2010 used when needed—<http://www.oanda.com/currency/converter/>

Source: Author's calculations from data in: Kang (2010), Sugimoto (2010), Kumar and Soumya. (2010), Patunru and Zetha (2010), Nguyen, Nguyen, and Nguyen (2010), Jitsuchon (2010), World Bank (2009b), FAITC (2009), Alibaba.com (2008), IFCE (2009), and ADB (2009).

Infrastructure Quality and GDP Growth



Note: Infrastructure Quality Score: 1 = poorly developed and inefficient, 7 = among the best in the world

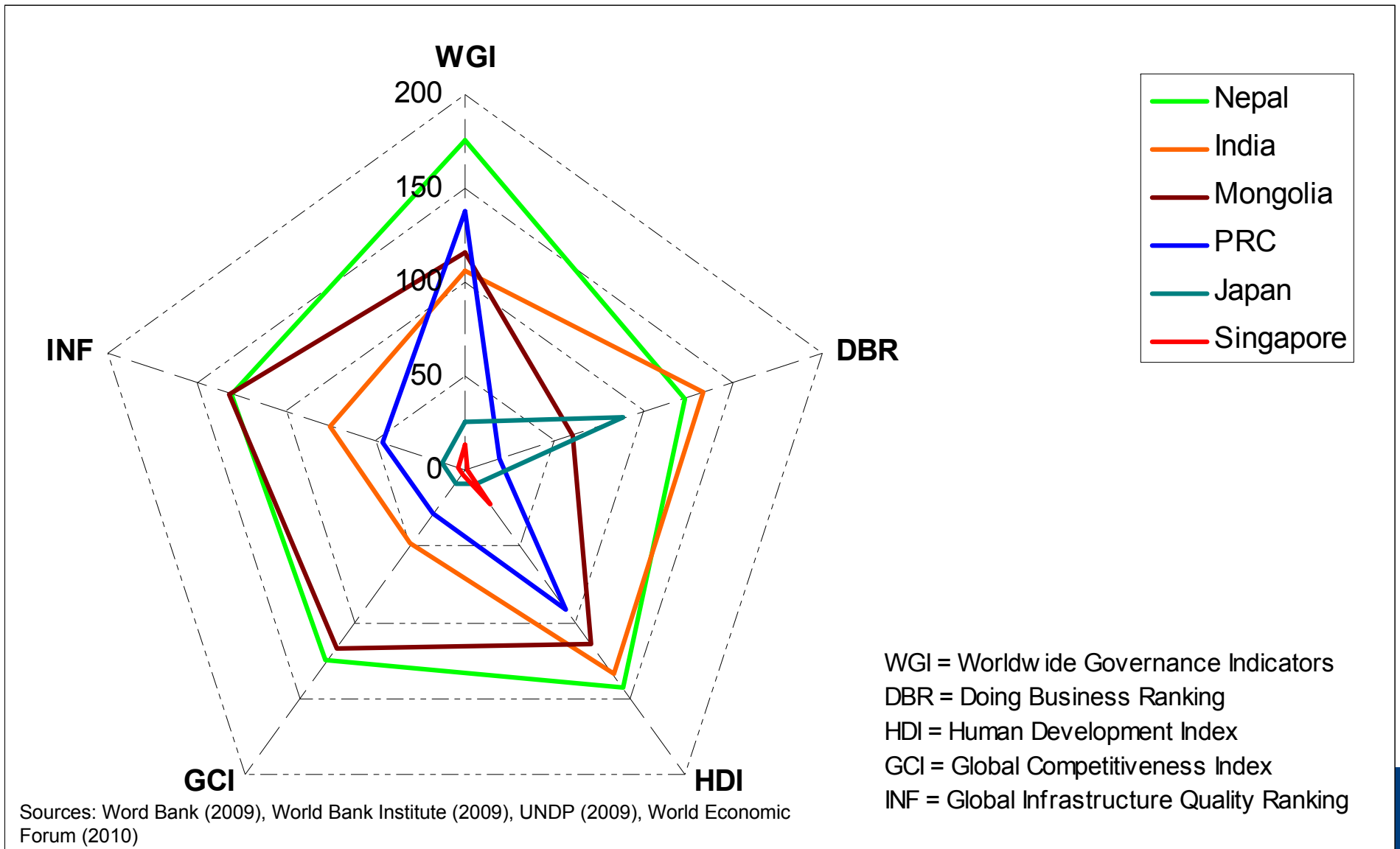
¹ Japan GDP growth data for 2008

Sources: World Economic Forum (2010), ADB (2009), ASEAN (2009)

Global Competitiveness Index and Infrastructure Quality Assessment, 2009

Countries	Global Competitiveness Index		Infrastructure Quality Index	
	Rank	Score	Rank	Score
Bangladesh	106	3.60	126	2.93
Cambodia	110	3.51	95	2.94
India	49	4.30	76	3.47
Indonesia	54	4.26	84	3.20
Malaysia	24	4.87	26	5.05
Mongolia	117	3.43	132	1.98
Nepal	125	3.34	131	2.03
Pakistan	101	3.58	89	3.06
Philippines	87	3.90	98	2.91
PRC	29	4.74	46	4.31
Singapore	3	5.55	4	6.35
Sri Lanka	79	4.01	64	3.88
Thailand	36	4.56	40	4.57
Viet Nam	75	4.03	94	3.00
Japan	8	5.37	13	5.83
Korea, Rep.of	19	5.00	17	5.60

Infrastructure Quality, Business Environment, Governance, and Human Development are Keys to Global Competitiveness



Objectives of the Study

- Examines the key issues and challenges in strengthening cross-border connectivity in Asia
- Examines benefits and costs of regional infrastructure
- Estimates the financing requirements for developing Asia's infrastructure
- Provides recommendations for effective programs, policies and institutions for regional infrastructure
- Presents a framework for pan-Asian infrastructure cooperation towards a Seamless Asia

Scope and Coverage of the Study

- Issues and challenges for regional infrastructure in Asia up to 2020
- ADB's 44 DMCs, Japan, and Brunei
- Broad pan-Asian initiatives and sector-specific subregional efforts—transport, energy, telecom
- Focus on “soft” infrastructure—policy, regulatory, governance, trade facilitation and institutional frameworks—to support development and operation of the “hard” component (physical structures, equipment, facilities, and services), and to facilitate regional trade

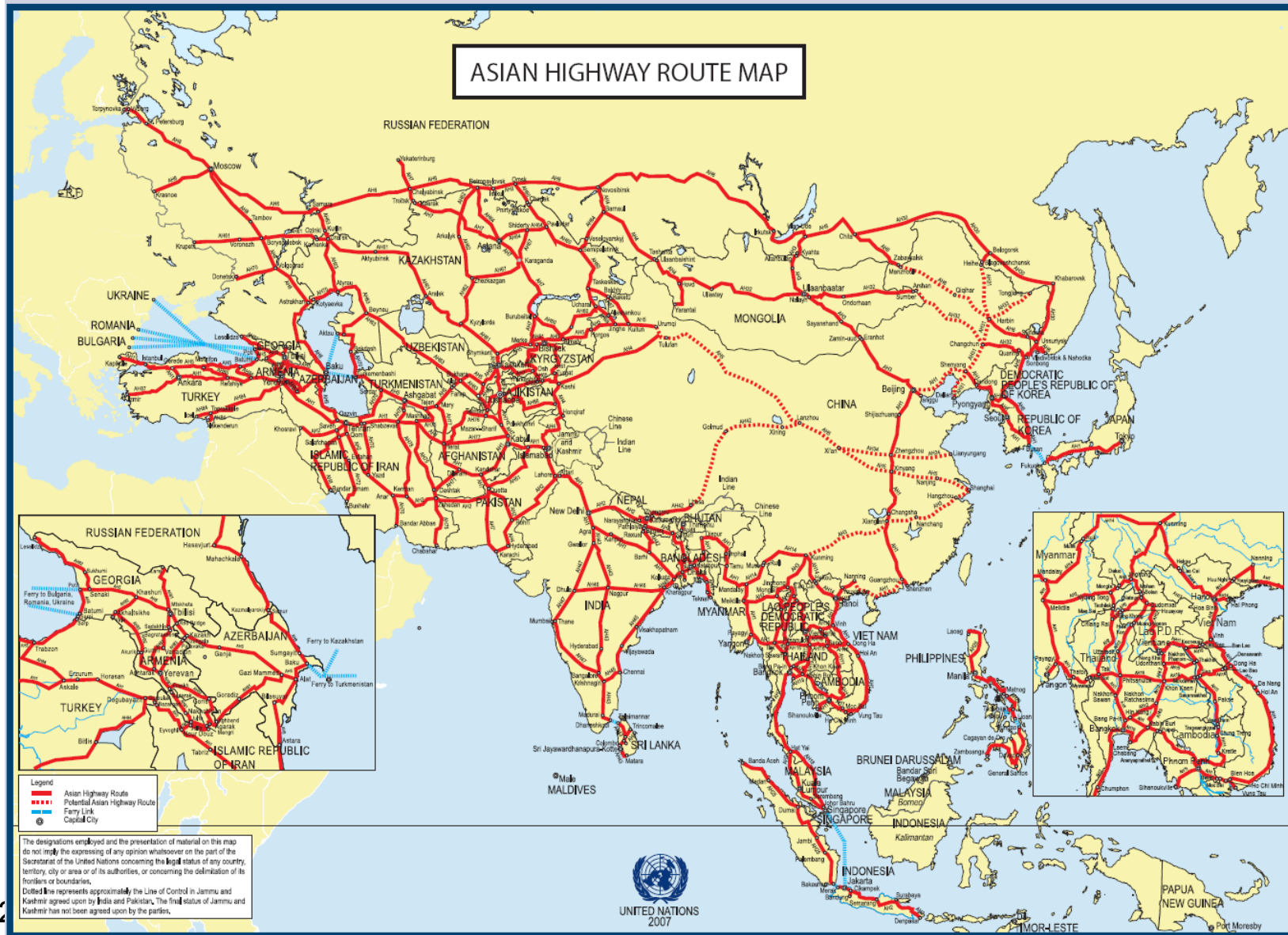
Long-Term Vision: A Seamless Asia Concept and Benefits

- Creation of a seamless Asia—an integrated region connected by world-class efficient environment-friendly energy, transport, telecommunications infrastructure pan-Asia networks
- Enhance integration, competitiveness, productivity for sustainable and inclusive growth, improve social conditions (MDGs), and promote peace and prosperity
- Enhance an economy's rate of innovational and technological advance and thus lift long-term growth
- Reduce trade and logistics costs and thus enhance intraregional trade
- Accelerate regional economic cooperation and integration through enhanced connectivity as well as institutional linkages
- Reduced transport cost enhances industrial agglomeration and dispersion
- Integration of network industries can generate huge economies of scale and innovation from network externalities
- Promote greater technologies and more efficient use of regional resources
- Regional transport and energy cooperation (e.g. cross-border railways and renewable energy and hydroelectric grids) can mitigate impacts of transport and energy investments on environmental degradation and climate change

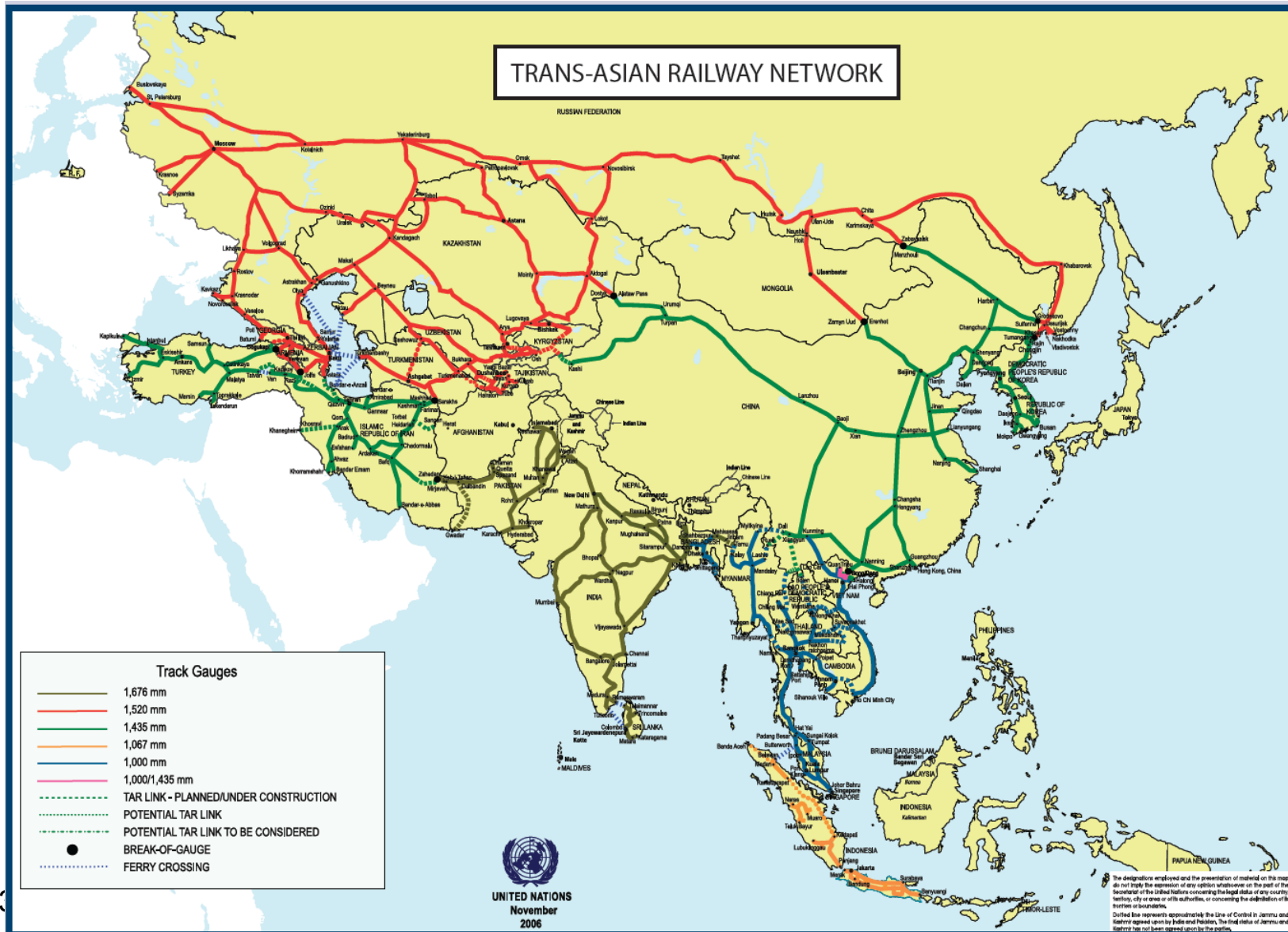
Pan-Asia Seamless Transport Connectivity

- Transport connectivity is not new in Asia – Silk Road – used to be the most important cross-border artery (13th Century); extensive pan-Asian interconnected network of trade routes across the Asian continent connecting East, South, Central and Western Asia
- Asian Highway Network aims to be a network of 141,271 km of standardized highways, incl. 155 cross-border roads that crisscrosses 32 Asian countries and seek to improve economic links among them
- Trans-Asian Railway Network aims to span 141,000km of railways across 28 countries, linking to the pan-European rail network at various locations, offering connections to major ports in Asia and Europe, providing landlocked countries with improved access to seaports either directly or in conjunction with highways.

Asian Highway (AH) Network



Trans-Asian Railway (TAR) Network



Source: UNESCAP (2009)

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Financing Needs for Asia's Infrastructure

Asia's total Infrastructure Investment Needs by Sector, 2010–2020

(2008 \$ million)

Sector/ Subsector	New Capacity	Replacement	Total
Energy (Electricity)	3,176,437	912,202	4,088,639
Telecommunications	325,353	730,304	1,055,657
Mobiles	181,763	509,151	690,914
Telephones	143,590	221,153	364,743
Transport	1,761,666	704,457	2,466,123
Airports	6,533	4,728	11,260
Ports	50,275	25,416	75,691
Railways	2,692	35,947	38,639
Roads	1,702,166	638,366	2,340,532
Water and Sanitation	155,493	225,797	381,290
Sanitation	107,925	119,573	227,498
Water	47,568	106,224	153,792
Total	5,418,949	2,572,760	7,991,709

Sources: ADBI (2009); Bhattacharyay (2008).

Investment Need for Regional Pipeline Projects

Region/ Subregion	Transport Projects		Energy Projects		Total	
	Cost (US\$ million)	No.	Cost (US\$ million)	No.	Cost (US\$ million)	No.
Asia	177,077	931	–	–	177,077	931
Asian Highway	43,276	121	–	–	43,276	121
Trans-Asian Railway	82,801	45	–	–	82,801	45
Asian Container Ports ¹	51,000	765	–	–	51,000	765
East/Southeast-Central-South Asia²	–	–	22,975	5	22,975	5
Southeast Asia³	5,858	17	41,444	33	47,302	50
GMS	5,858	17	2,604	14	8,462	31
Trans- ASEAN Gas Pipeline	–	–	7,000	1	7,000	1
BIMP-EAGA	–	–	100	1	100	1
Others	–	–	31,740	17	31,740	17
Central Asia	21,414	38	11,131	44	32,545	82
CAREC	21,414	38	10,861	43	32,275	81
Others	–	–	270	1	270	1
South Asia	293	3	6,846	6	7,139	9
Total	204,642	989	82,396	88	287,038	1,077

Note: (–) = data not available

¹ Dry and sea ports, container depots (UNESCAP, 2007: pp.79-82);

² Projects involving countries belonging to more than one subregion

³ Some projects involved countries in East Asia, such as PRC and Mongolia

Source: ADB/ADBI (2009), and Bhattacharyay (2008)

Benefits of Infrastructure Investment

Pan-Asia

- During 2010–2020, Asia needs to invest about \$8 trillion in national infrastructure and \$290 billion in specific regional infrastructure projects—an overall average infrastructure investment of about \$750 billion per year
- The required infrastructure investment for pan-Asian connectivity in the transport, communications, and energy sectors during 2010–2020 would produce substantial real income gains of about \$13 trillion for developing Asia during this period and beyond

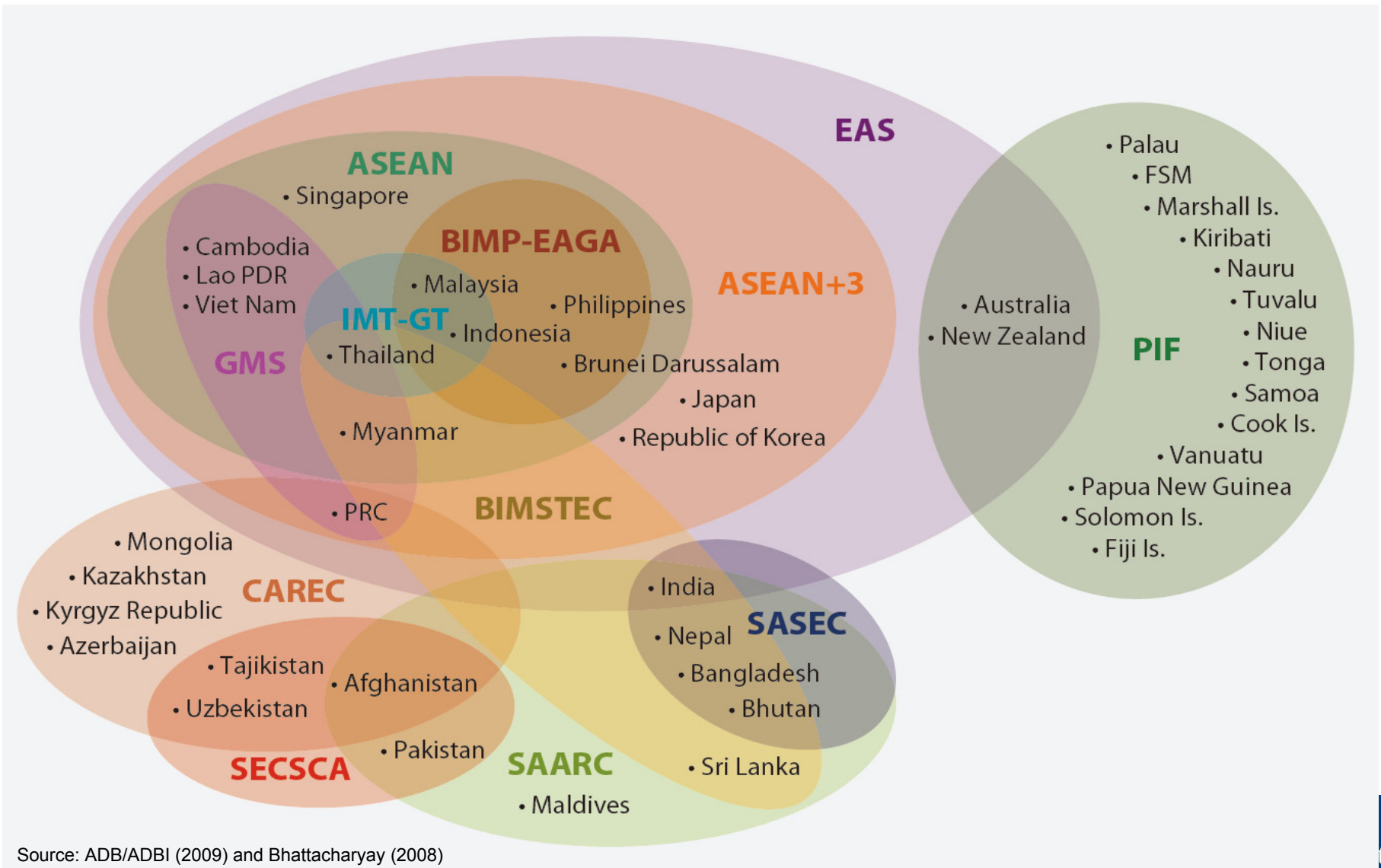
GMS

- Exports of countries grew by more than 300% from 1992 to 2005
- Intraregional trade increased even more dramatically in 2004, it was 12 times the 1992 level
- Annual tourist arrivals doubled from 10 million in 1995 to an estimated 20 million in 2005
- Net FDI inflows to GMS increased from about \$3 billion in 1992 to about \$5.5 billion in 2005 (excluding inflows to PRC and Myanmar)

Meeting the Financing Needs

- The region's vast domestic savings and international reserve as the main source of financing for Asia's infrastructure
- Strengthen national and regional local currency bond markets—notably the Chiang Mai Initiative (CMI), the ASEAN+3 Bond Market Initiative (ABMI), and the Asian Bond Funds (ABF)
- Identify and prepare “bankable” projects to encourage private financing involving PPPs

Architecture for Subregional Integration and Cooperation



Source: ADB/ADBI (2009) and Bhattacharyay (2008)

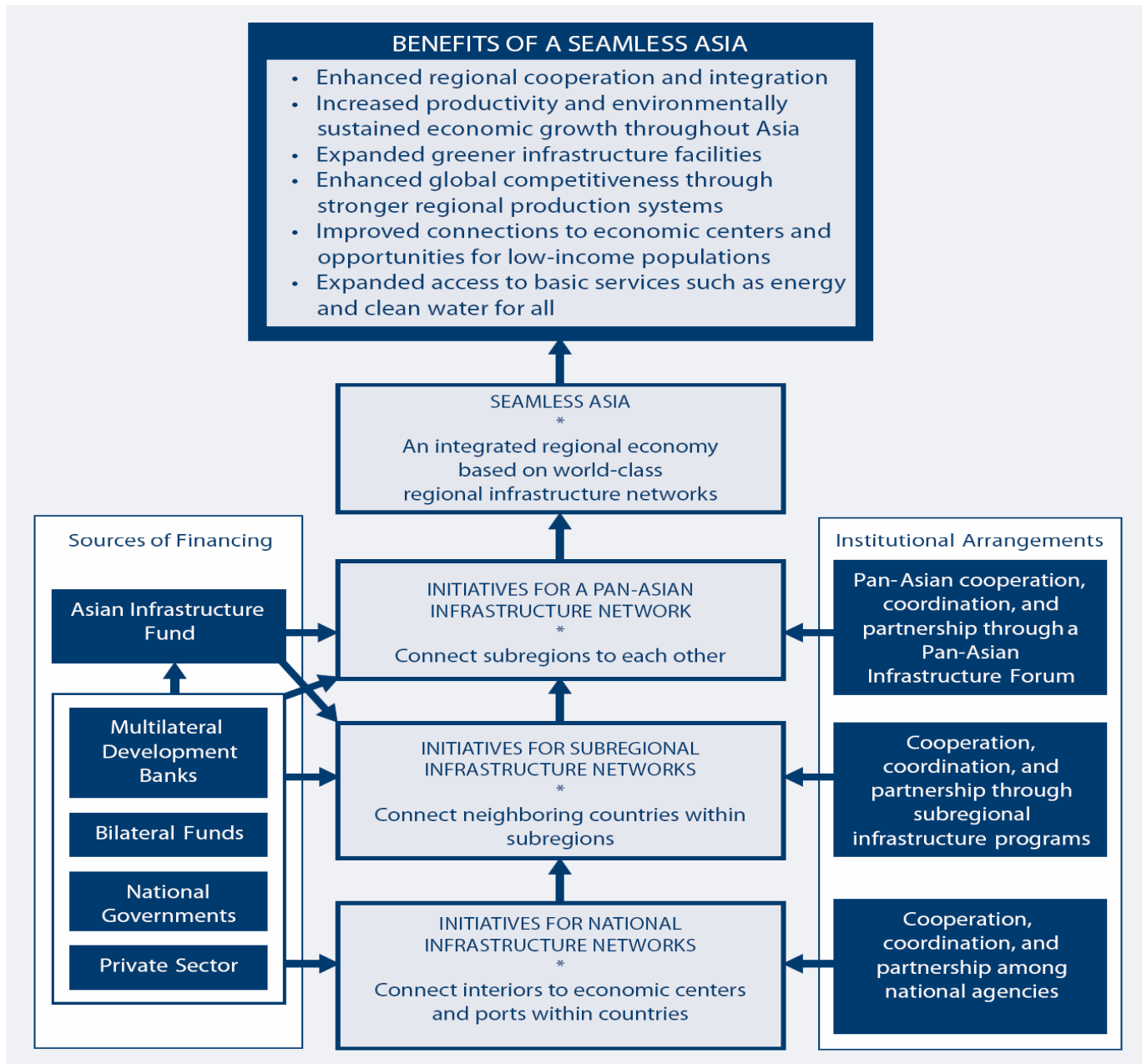
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Institutions for Connectivity

- Due to diverse Asian economies, many overlapping subregional institutions are operating with varied speeds & addressing regional infrastructure issues in different degrees with multiple objectives;
- Multilateral institutions (such as ADB and WB) should play bigger roles in developing regional infrastructure. Their expanded roles include: as financiers, knowledge partners and technical advisers, capacity builders, and as honest brokers.
- An “Asian Infrastructure Fund (AIF)” is needed to mobilize international funds (public and private) and help prioritize, prepare, and finance “bankable” regional infrastructure projects
- A “Pan-Asian Infrastructure Forum (PAIF)” should be established to help coordinate and integrate existing subregional infrastructure initiatives toward a seamless Asia

A Framework for Pan-Asian Infrastructure Cooperation



Conclusion

- In view of Asia's enormous untapped economic potential and the ongoing global financial and economic crisis, now is the time to build efficient and seamless connectivity across Asia and with the rest of the world for a more competitive, prosperous, and integrated region.

Seamless connectivity requires:

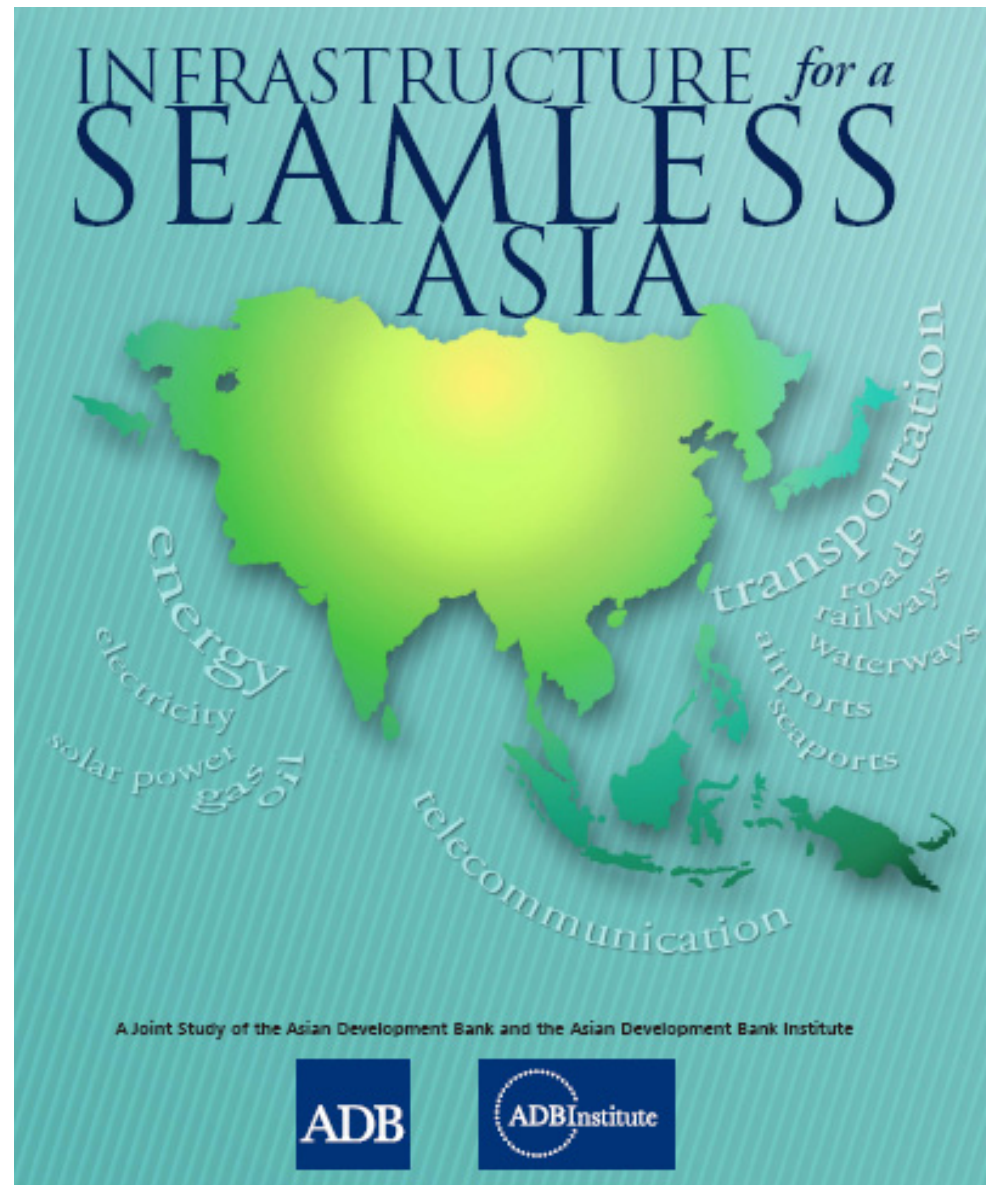
- A common vision, strong leadership and a shared commitment by Asian leaders
- Strong institutional capacities at the national level
- Coherent infrastructure development at the national, subregional, and regional levels
- Pan-Asian infrastructure strategies to prioritize investments and coordinate policies

Conclusion (cont'd)

- Effective planning and implementation of projects to ensure “win-win” outcomes among participating countries by:
 - Addressing issues of asymmetric distribution of projects’ costs and benefits
 - Managing negative socioeconomic and environmental impacts
- Effective financing framework to help mobilize the region’s vast savings, and encourage public-private partnerships
- Asian countries, international/regional development partners (e.g. ADB, WB, and UNESCAP), and bilateral organizations of OECD countries and major Asian economies (such as JBIC and JICA) can work together to achieve a Seamless Asia

The “Infrastructure for a Seamless Asia” book was published in September 2009)

This is the first time such a study on regional infrastructure had been undertaken.



Free download online - <http://www.adbi.org/book/2009/09/15/3322.infrastructure.seamless.asia/>

Thank You

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