

Expert Group Meeting on  
**Asian Partnership in Financing SDGs**

Dhaka: 16-17 May 2015

Working Session 1

**Public-Private Partnership (PPP)**  
*The Asian Experience*

16 May 2015

**Financing Public-Private Partnership in Infrastructure**  
*An Asian Perspective*

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# Structure of Presentation

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1. Relevance of Infrastructure and Infrastructure Deficits in Asia
2. PPPs: Concept, Rationale and Rising Popularity
3. Infrastructure PPP Deals in Asia
4. PPP Readiness in Asia
5. Correlates of PPP Investment: Econometric Analysis
6. Improving PPP Outcomes: Cross Cutting Issues
7. Conclusion and Policy Implication

# Section 1

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1. Relevance of Infrastructure and Infrastructure Deficits in Asia

# Asia: A Hope for the Global Economy

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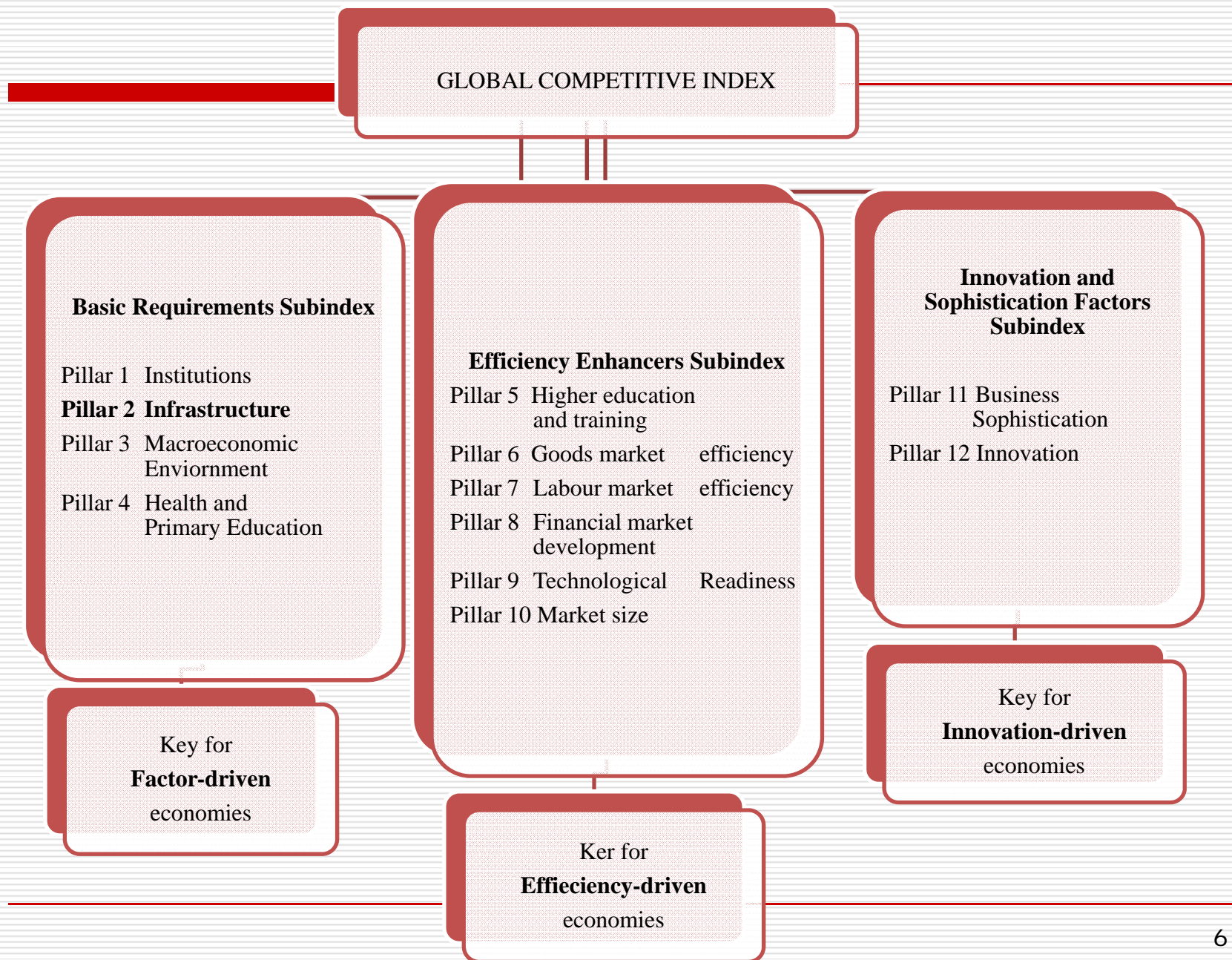
- Asia is getting **richer**, not only **absolutely** but also **relatively**.
- Over the last decade, Asia increased its share of global GDP from **24% to 31%**. Its vast population is increasingly urban and increasingly middle class.
- **Post the deep recession** in US and Europe triggered by the financial crisis, the world is looking towards Asia as the **engine of growth**.
- However, Asia is also at a **crossroads**.

# Infrastructure: Impact on Growth and Poverty

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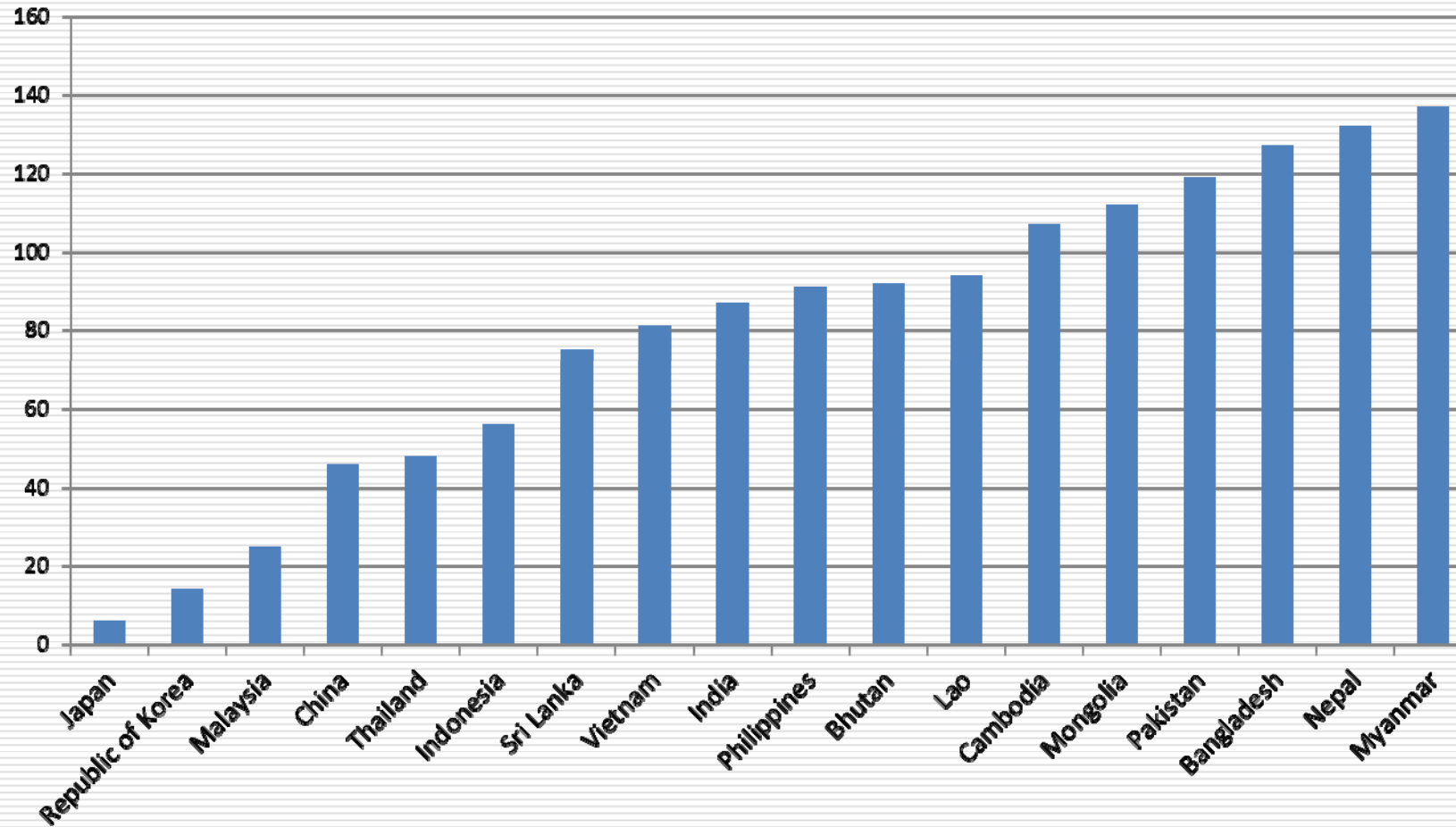
- Infrastructure plays a key role in promoting and sustaining rapid **economic growth**, and helps **reduce poverty**.
- **However**, in Asia, investment in infrastructure has **not kept pace** with the rising demand on account of the region's rapid economic growth, and rising population (ADB 2007).
- Inadequate physical infrastructure has been an impediment to not only growth, but also one of the root causes of poverty (WB, 1994; ADB 2009). Access to clean drinking water, electrified homes, telecommunication network, and paved roads remains dismal.

# Global Competitive Index and its 12 Pillars

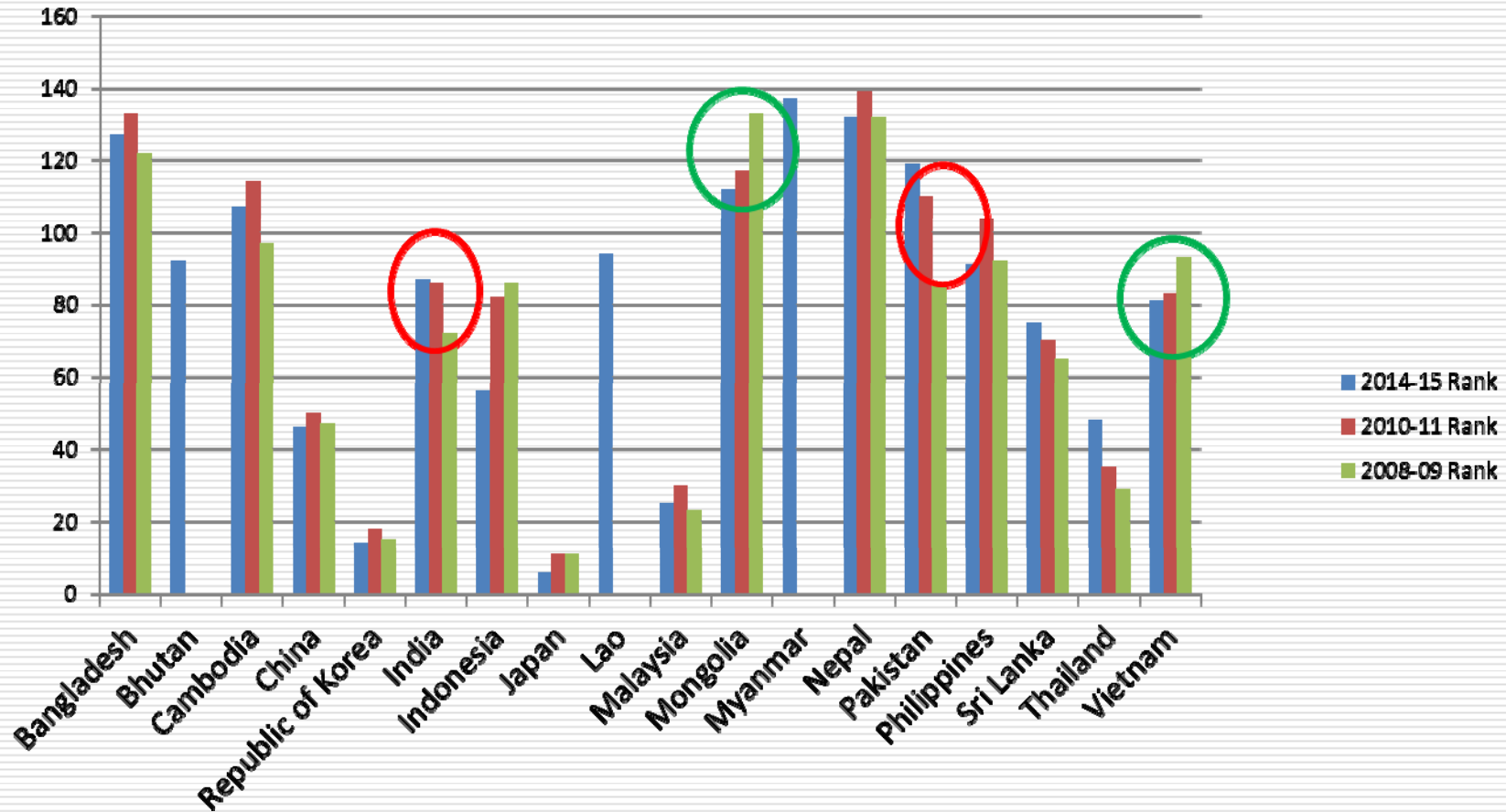


## Infrastructure in Asian Economies: Rank (2014-2015)

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# State of Infrastructure in Asian Economies

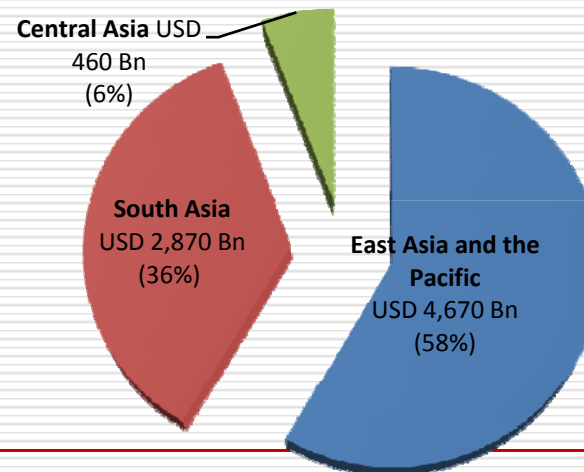




# Infrastructure Deficit in Asia

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- Asia's infrastructure investment needs are equivalent to **USD 8 trillion** over the period 2010 to 2020. This amounts to about **USD 730 billion** annually.
- 68 per cent of this is for **new capacity** and 32 per cent for maintaining and **replacing existing infrastructure**.
- **Electricity** and **Roads** account for 51 per cent and 29 per cent of the total, respectively.
- **Region-Wise**: East Asia and Pacific needs 58%, S. Asia 36%, and Central Asia 6% (ADB, 2009)



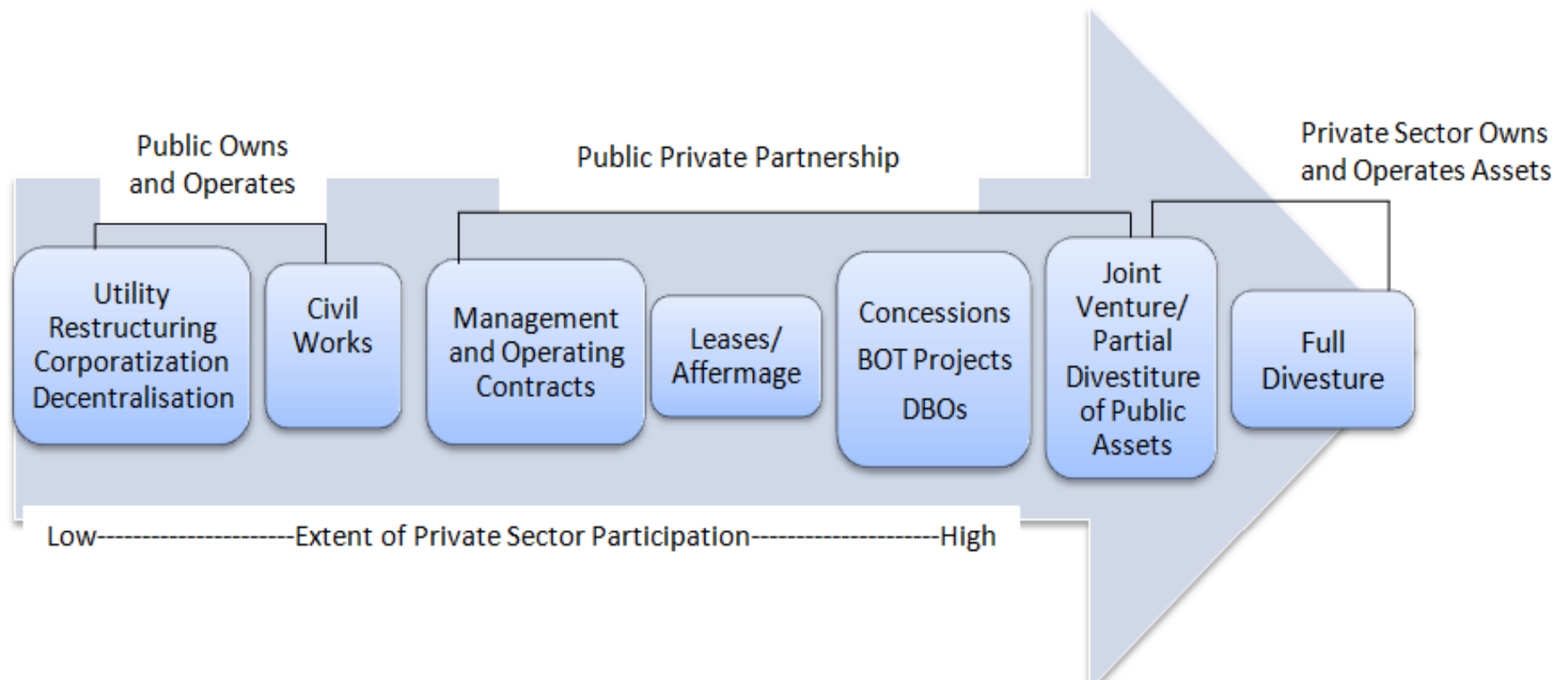
## Section 2

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PPPs: Concept, Rationale and Rising Popularity

# Public Private Partnership: Concept and Rationale

**Concept:** A cooperation between government and business agents that agree to work together to reach a common goal or carry out a specific task, while jointly assuming risks and responsibilities and sharing resources and competencies.



# PPP: Rising Popularity in Global Forums

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- ❖ Busan's Global Partnership for Effective Development Cooperation (2011)
- ❖ Zero Draft of the Outcome Document of the Third Financing for Development Conference (2015): Addis Ababa Accord
- ❖ The High Level Panel (HLP, 2011) on Infrastructure, a product of the G20 Seoul Summit's Multi-Year Action Plan on Development
- ❖ The Open Working Group on Sustainable Development Goals (OWG, 2015)

## In general, the following is recommended:

- ✓ Strong vision, high-level political engagement
- ✓ Establishing conducive PPP environment: legal and regulatory frameworks
- ✓ Effective accountability mechanism, with Clear reporting mechanisms
- ✓ Inclusive partnership
- ✓ Transparency
- ✓ Share risks and rewards fairly
- ✓ Implemented following feasibility studies that demonstrate Value for Money
- ✓ Strong and sustainable supply of bankable projects

# Rationale: Helps Bridge Infrastructure Deficit

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- Where market and/or non-market failures exist.
- Financial constraints faced by governments.
- PPPs bring greater efficiency and sustainability.
- Better allocation of risks.

PPP not a panacea for all problems. It too generates challenges.

Therefore, need to justify the **Double Market Failure Criterion**.

In other words,

- **First**, one must establish sound evidence of market/non-market failure, and
- **Second**, one must also search for evidence that net benefits are larger under PPP than under pure private sector/government sector involvement.

**Value for Money**

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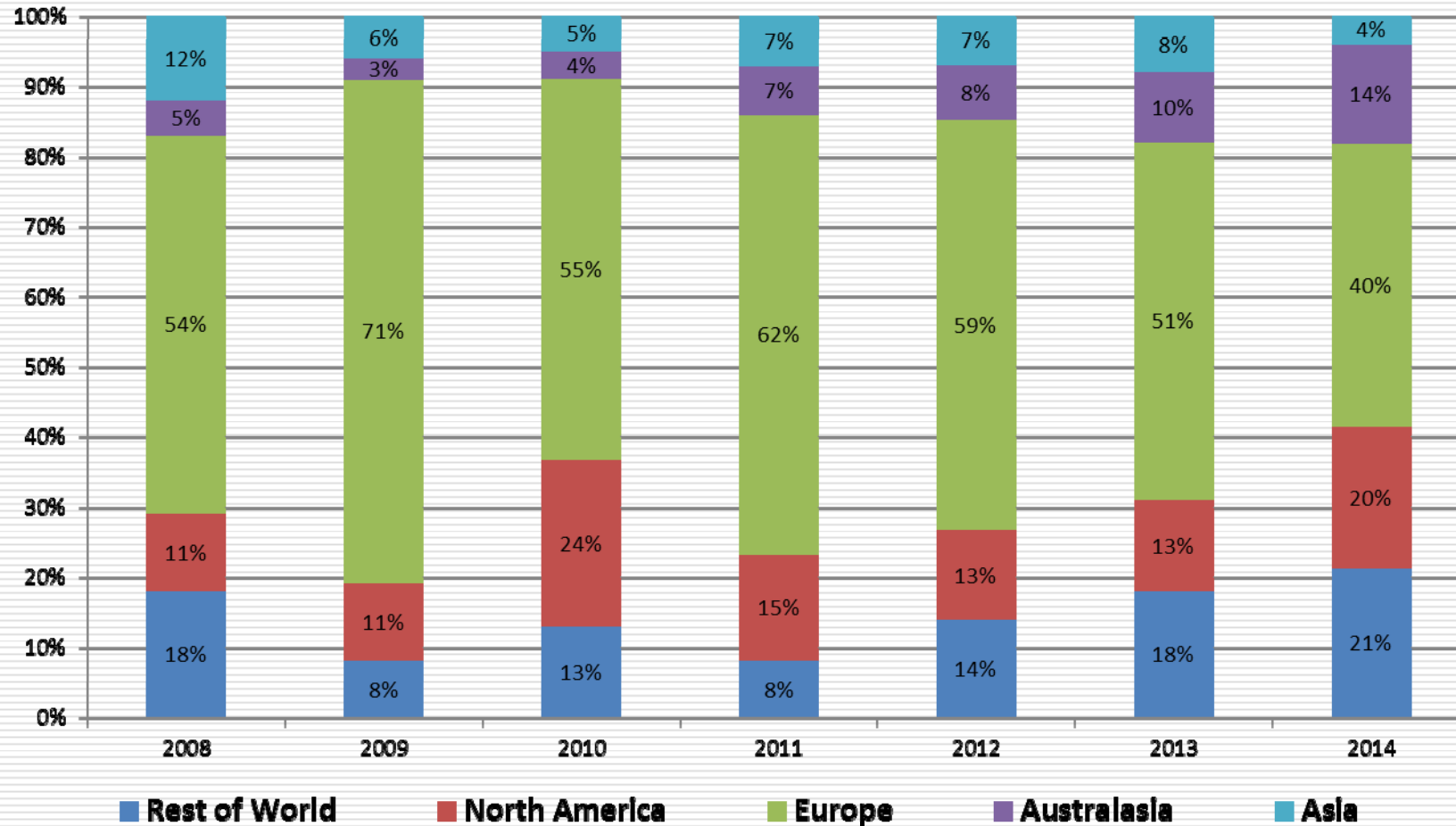
# Section 3

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## Infrastructure PPP Deals in Asia

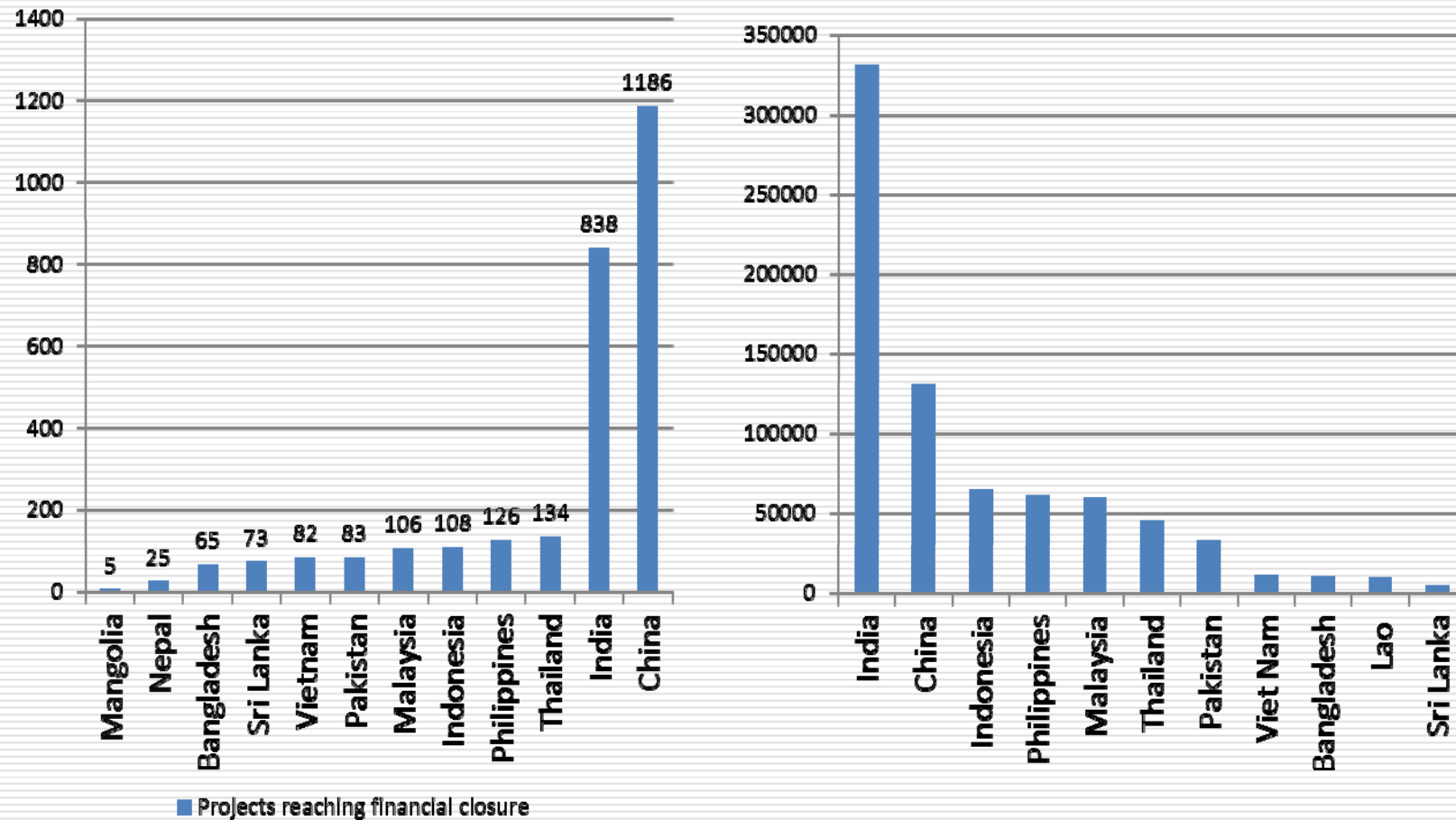
- Overall Size of PPP Sector: Number of Deals and Value of Deals
- Sectoral Distribution of PPPs: Number of Deals and Value of Deals
- Sub-Type of Private Participation in Infrastructure, and
- PPP Success Rate in Asia

# Infrastructure PPP Deals: Asia in a Global Perspective



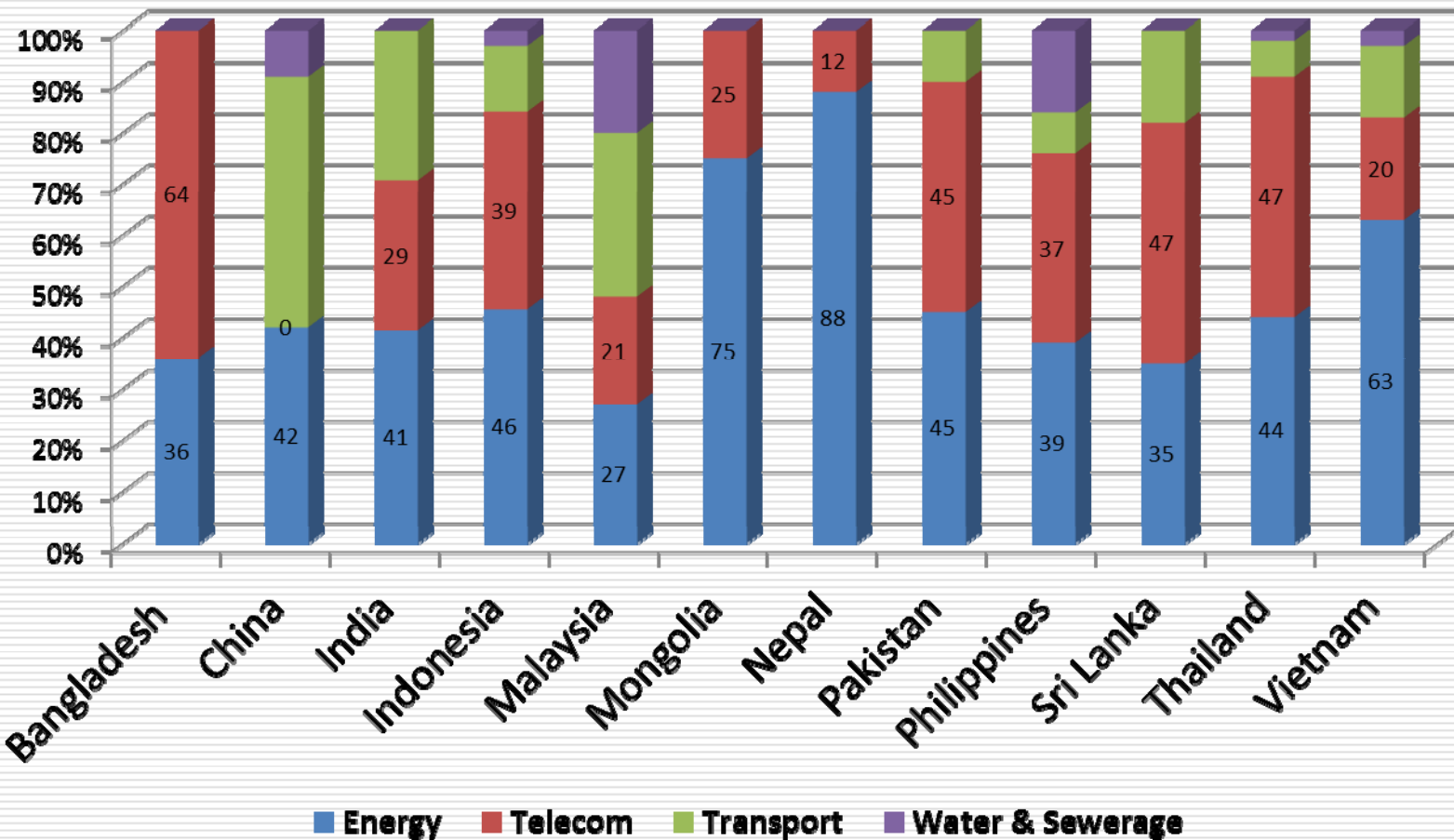
Source: Preqin Infrastructure Online

# Size of PPP Sector: Number of Deals and Value of Deals

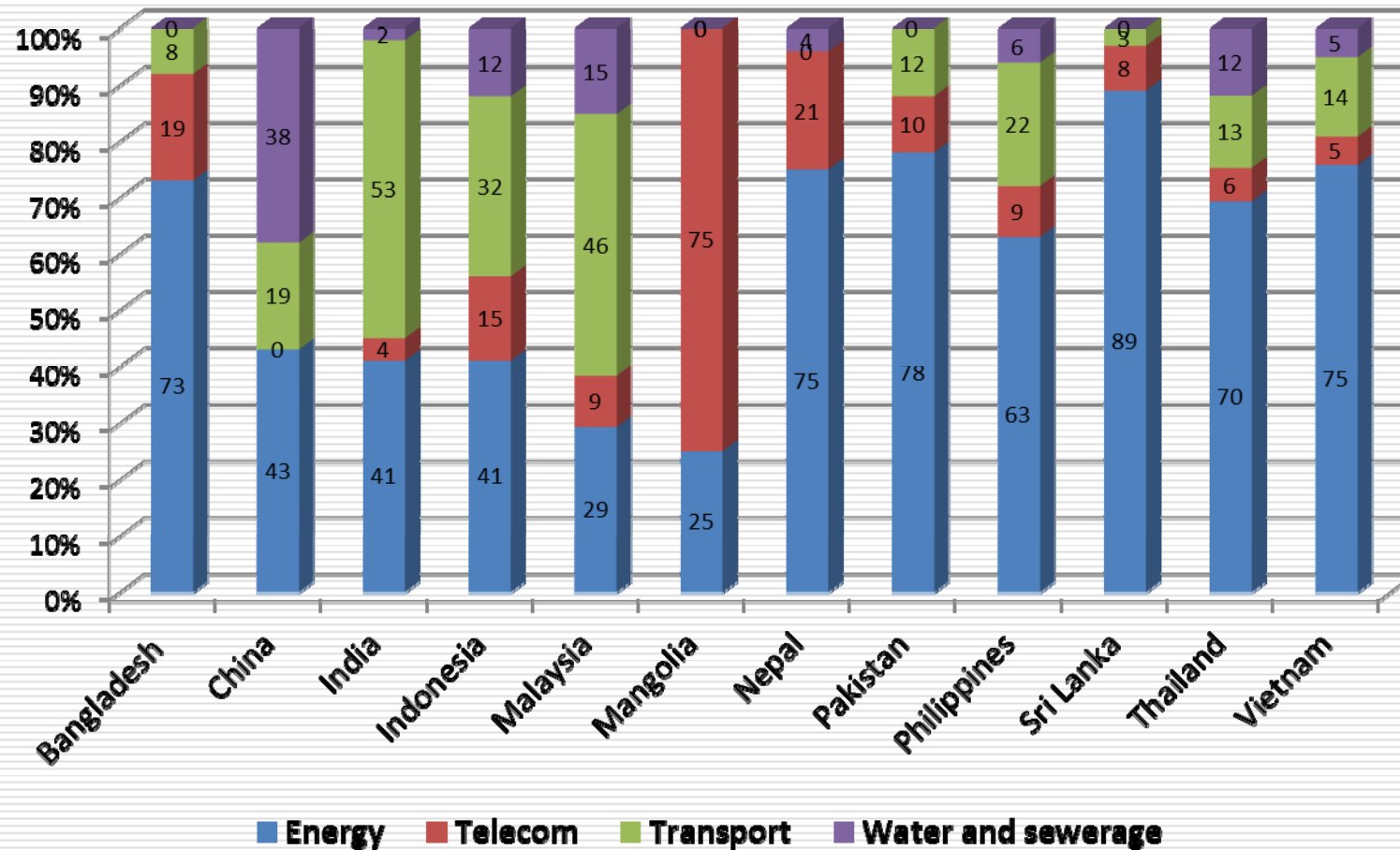




## Sectoral Distribution of PPP: In Terms of Value of Investment over 1990 to 2014 (%)



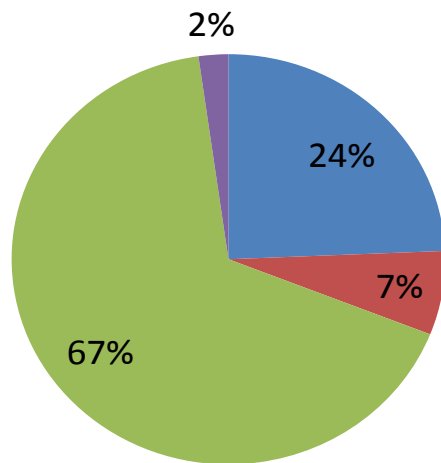
# Sectoral Distribution of PPPs in terms of Number of Projects over 1990 to 2014 (%)



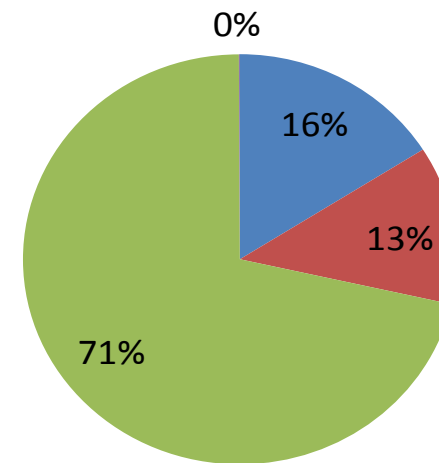
# PPP Projects by Type

## Number of Projects and Value of Projects

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- Concession
- Divestiture
- Greenfield project
- Management and lease contract



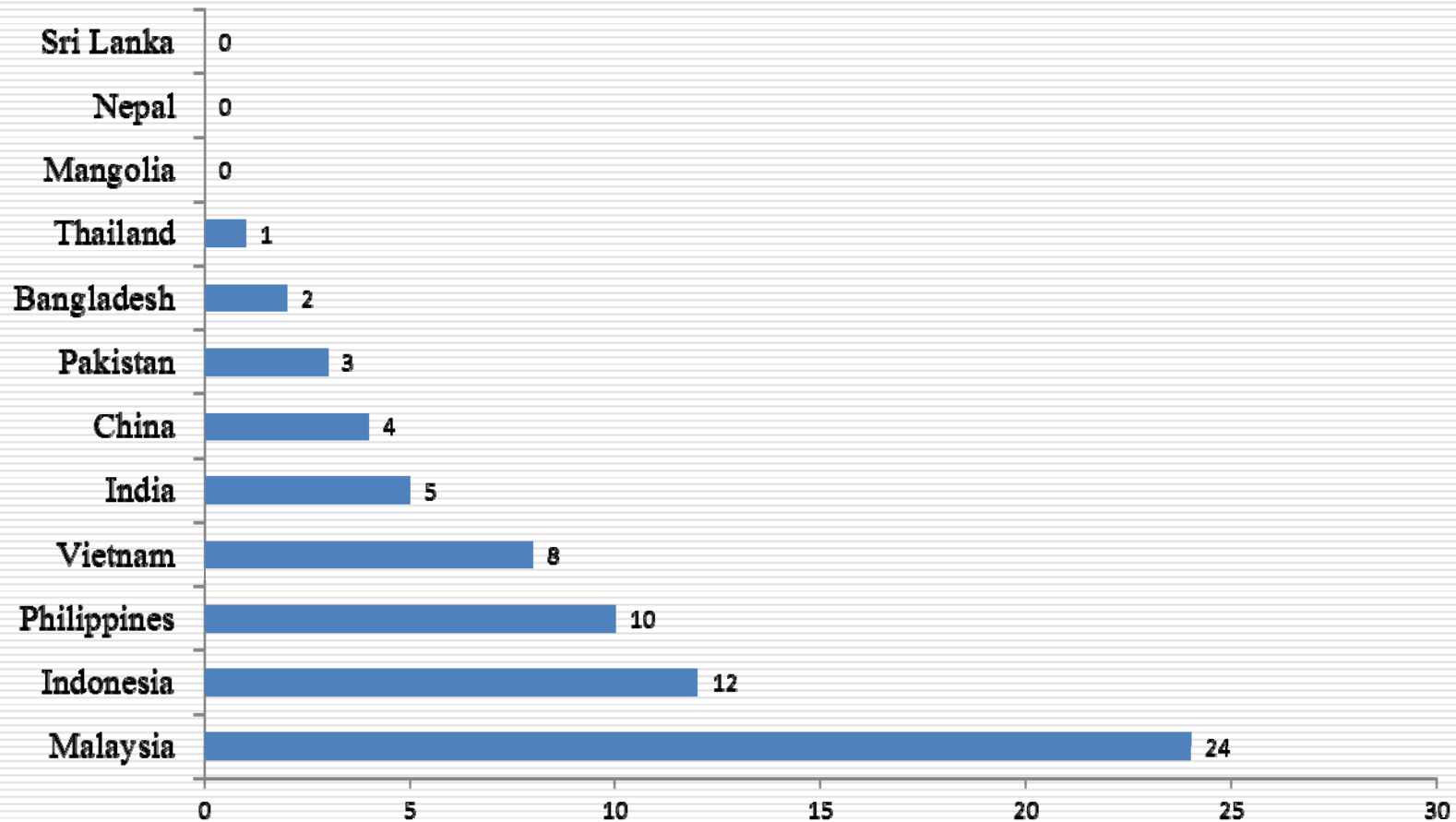
- Concession
- Divestiture
- Greenfield project
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## ‘Number’ of PPP Deals and ‘Value’ of PPP Deals

Country	Total Number of Deals				Total Investment (USD Million)			
	1990-00	2001-14	% Change	Total	1990-00	2000-14	% Change	Total
<b>Bangladesh</b>	10	55	450	65	1052	9741	826	10793
<b>Cambodia</b>	10	21	110	31	399	3573	795	3972
<b>China</b>	282	904	221	1186	54607	76151	39	130758
<b>India</b>	108	730	576	838	20855	310195	1387	331050
<b>Lao</b>	5	14	180	19	643	9265	1341	9908
<b>Malaysia</b>	64	42	-34	106	32150	27935	-13	60085
<b>Nepal</b>	5	20	300	25	352	781	122	1133
<b>Pakistan</b>	31	52	68	83	6991	26335	277	33326
<b>Philippines</b>	61	65	7	126	28813	32681	13	61494
<b>Sri Lanka</b>	15	58	287	73	1181	4001	239	5182
<b>Vietnam</b>	10	72	620	82	895	10703	1096	11598

# Projects Cancelled or Distressed (% of total investment)

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# Section 4

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PPP Readiness in Asia

# PPP Readiness in Asia

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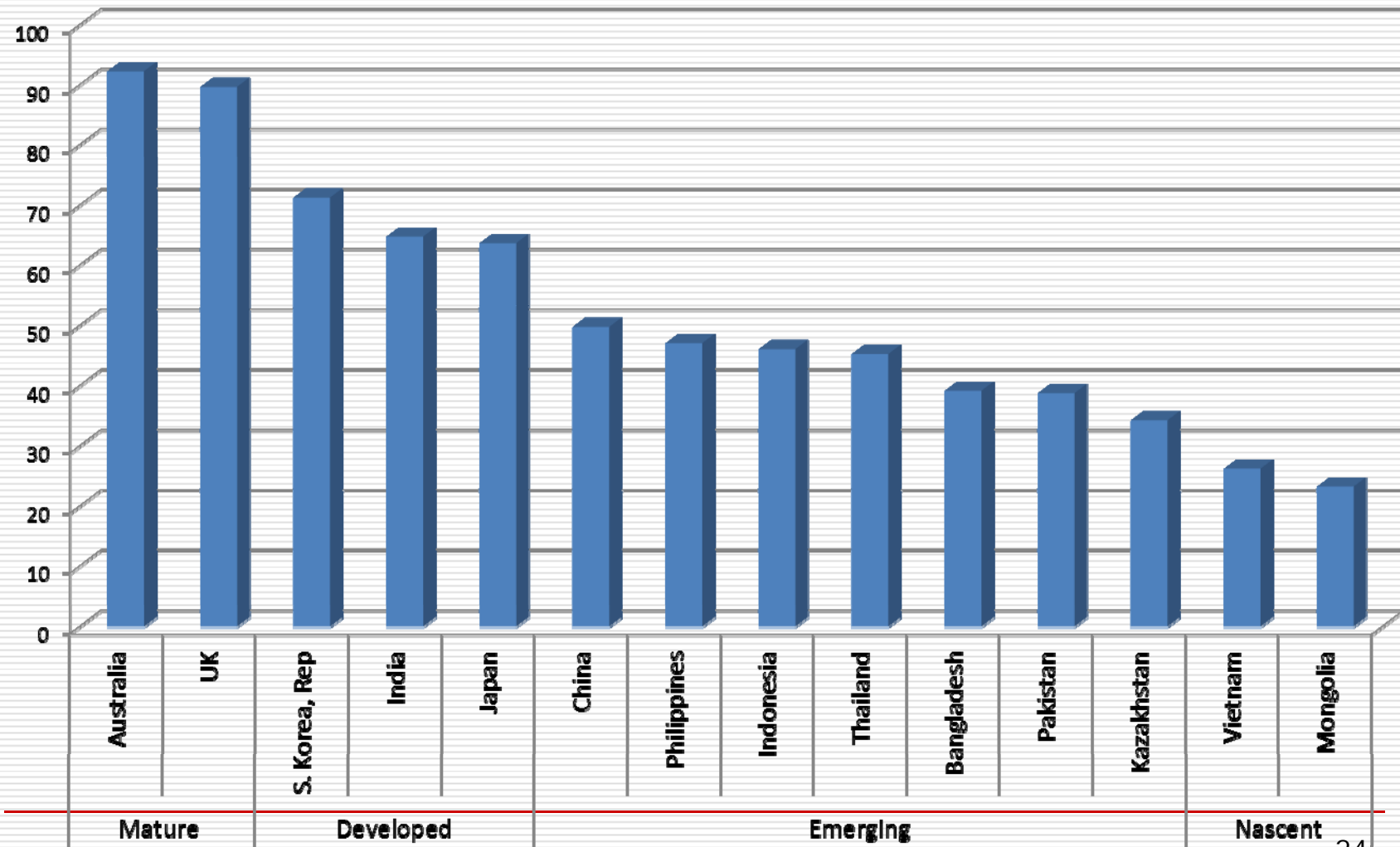
## Based on 6 Parameters:

1. Regulatory framework (25%)
2. Institutional frameworks (20%)
3. Project experience and success (15%)
4. Investment climate (15%)
5. Financial facilities (15%) for funding infrastructure, and
6. An indicator for sub-national PPPs (10%)

## Countries classified as:

- Mature PPP economies
- Developed PPP economies
- Emerging PPP economies &
- Nascent PPP economies

# PPP Readiness: Overall Index (EIU: Infrascope 2011)





# PPP Readiness: Sub-Components

(EIU: Infrascope 2011)

Assessment	Country	Overall Score	Legal and Regulatory Framework	Institutional Framework	Operational Maturity	Investment Climate	Financial Facilities	Sub-National Adjustment
Mature (80-100)	Australia	92.3	100	100	66.5	87.4	94.4	100
	UK	89.7	96.9	100	76.7	82.3	94.4	75
Developed (60-80)	S. Korea	71.3	78.1	75	68.8	54.2	88.9	50
	India	64.8	59.4	66.7	70	52.3	72.2	75
	Japan	63.7	50	66.7	61.4	57.5	83.3	75
Emerging (30-60)	China	49.8	31.3	25	78.1	51.6	66.7	75
	Philippines	47.1	43.8	41.7	44.8	46.3	61.1	50
	Indonesia	46.1	40.6	41.7	47.9	50.3	52.8	50
	Thailand	45.3	28.1	50	50.9	48.6	55.6	25
	Bangladesh	39.2	40.6	33.3	41	47.3	44.4	50
	Pakistan	38.8	34.4	33.3	25.5	43	38.9	50
	Kazakhstan	34.3	25	41.7	15.7	43.3	55.6	25
Nascent (0-30)	Vietnam	26.3	18.8	16.7	25.5	46.4	33.3	25
	Mongolia	23.3	25	25	3.1	46.9	13.9	25

# Section 5

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Correlates of PPP Investment: Econometric Analysis

# Correlates of PPP

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It is often contended that PPPs tend to be more common in countries where (Hammami et al., 2006):

- Governments suffer from heavy debt burdens
- Where aggregate demand and market size are large
- Macroeconomic stability exists
- Political environment is stable
- Institutional quality is high, i.e. where corruption is less and rule of law is effective, and
- Where countries have previous PPP experiences

We too examine the correlates of PPP in Asia

Number of Countries: 9

Time Period: 2000 to 2012

Fixed Effects Panel Regression

	<b>Econometric Results: Total Investment</b>					
	(1)	(2)	(3)	(4)	(5)	(6)
Government Debt (% of GDP)	-174.920 (155.011)	-177.009 (155.141)	-258.717** (123.475)	-183.917 (113.280)	-115.669 (110.531)	-116.950 (111.466)
Population (log)	148736.841** (59176.484)	188890.692** (72557.981)	77732.126 (73631.958)	246595.653*** (81718.154)	211644.21*** (78587.630)	208241.424** (79552.296)
Legal System & Property Rights	2745.696 (2077.937)	3634.256 (2277.037)	850.315 (2203.451)	802.153 (1986.119)	2211.960 (1959.492)	2156.620 (1978.921)
Regulation Index		3634.256 (2277.037)				
Lower Credit market Regulations			-4928.498** (2234.897)	-5946.162*** (2034.805)	-5527.396*** (1934.239)	-5634.557*** (1963.032)
Lower Labor Market Regulations			18674.146*** (3449.197)	12103.565*** (3620.363)	10013.066*** (3524.235)	10295.339*** (3602.339)
Lower Business Regulations			-3537.555* (2020.590)	-3680.252** (1821.696)	-2628.162 (1773.343)	-2785.849 (1818.367)
Trade Openness				309.631*** (87.423)	238.539*** (87.299)	235.354** (88.266)
Net Bilateral aid flows (Total USD)					0.000** (0.000)	0.000** (0.000)
Deviation of Exchange Rate						1.859 (3.912)
Constant	-1169312.7**	-1465094.9**	-660150.2**	-1972220.5***	-1699392.1***	-1672533.1***
N	68	65	65	65	65	65
Groups	9	9	9	9	9	9
R <sup>2</sup>	0.195	0.208	0.571	0.659	0.700	0.701
F	4.519	3.614	11.101	13.504	13.997	12.266

# Section 6

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## Improving PPP Outcomes: Cross Cutting Issues

- i. Allocating PPP Risk
- ii. Addressing Barriers to Competition and Efficiency in the Procurement of PPPs
- iii. Addressing Financial Challenges
- iv. Creating Good Governance Structures
- v. Impact Assessment

# Improving PPP Outcomes

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## Cross Cutting Issues

- Allocating PPP Risk
- Addressing Barriers to Competition and Efficiency in the Procurement of PPPs
- Creating Good Governance Structures
- Impact Assessment of PPPs
- Addressing Financial Challenges

# Allocating PPP Risk

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- An important goal of a well-designed PPP is to pick out the strengths and weaknesses of public and private sector independently, and allocate risks to those who are best able to manage them.

# Addressing Barriers to Competition and Efficiency in the Procurement of PPPs

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- ❖ Some of the most common issues that act as *barriers to competition* are: A largely unknown pipeline of projects that is sporadic in nature; a perceived lack of commitment to PPPs; and the magnitude of bid costs.
- ❖ Key factors that are identified for *driving inefficiencies* are lack of skill and expertise of government team managing the process, and the government's level of commitment to the project and the PPP procurement model.



# Addressing Financial Challenges

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Highest Savings, yet inadequate mobilization mechanism

## **Structural Shortcomings of the Asian Financial System:**

- ❖ Asian financial sector is **dominated by short-term bank funded financing**;
- ❖ It suffers from **shallow capital markets**
- ❖ There is **paucity of “real money” long-term investors**, such as insurers and pension funds, and lack of Risk Transfer Mechanisms
- ❖ Structural weakness in the ability to maintain financial stability

(Additional problems associated with **Basel III**: funding costs to go up by 2-5%, and RoE for project finance expected to decrease by 5%. Asian countries therefore need to develop a deeper understanding of the product level implications of these regulations and build a more cohesive Asian view to be heard at the global level)

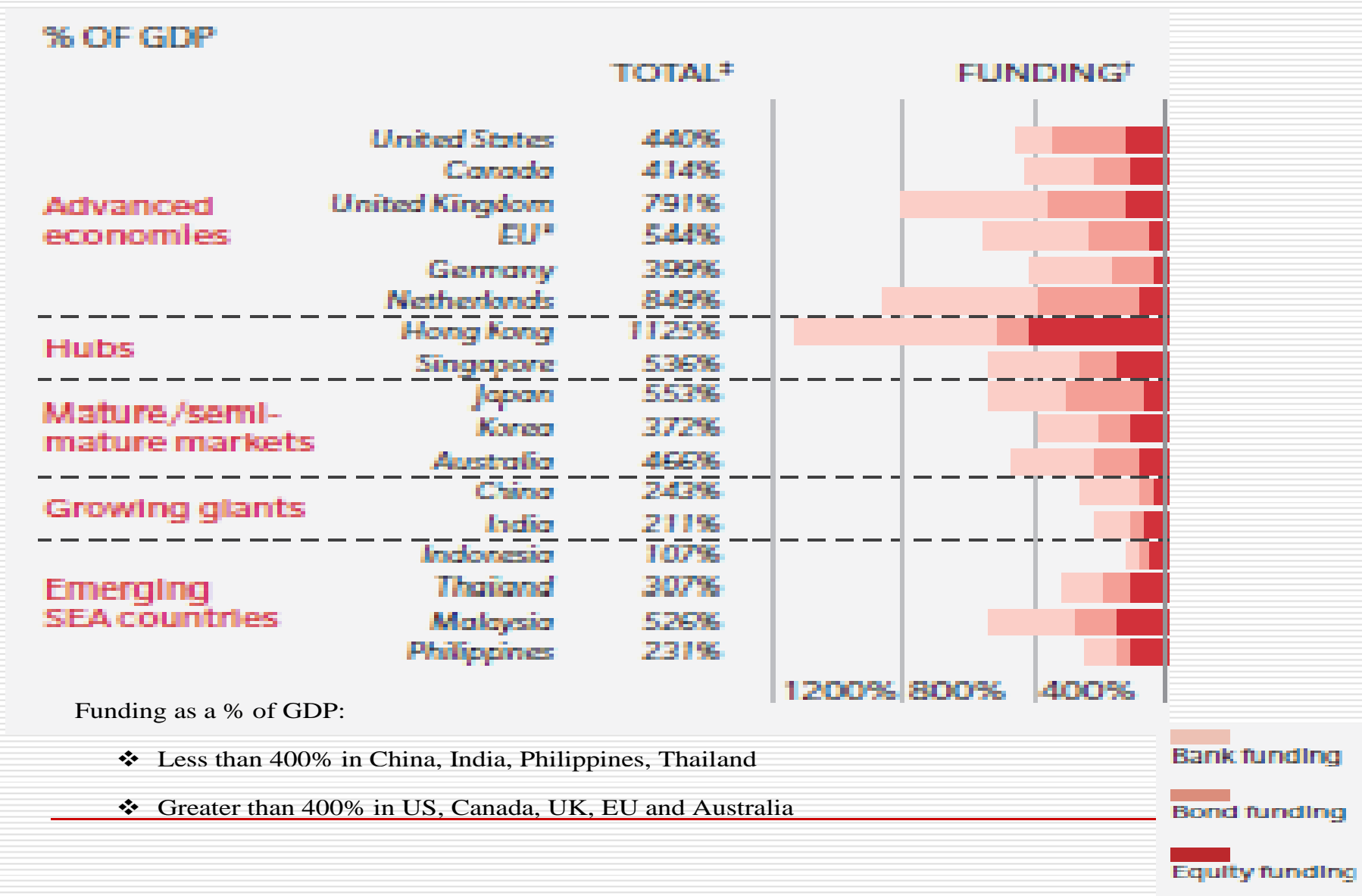
# Short-term, Bank Funded Financing

(Wyman, 2013)

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- In Asia, Investments are more **Debt Funded**, rather than **Equity Funded**.
- Bank Loans as a per cent of total debt funding remains in excess of **70%** for India, China, Japan and Singapore. **By contrast**, US Bank Loans as a per cent of total debt funding remains close to **40%**.
- The dominance of bank lending is especially evident in China, where capital markets remain under-developed. In 2012, Chinese banks provided 70% of total financing (or 85% of total debt financing).
- Banks' contractually long-term funding in Emerging Asia amounts to only **4%** of GDP, **compared to** about **10%** in the US and **27%** in the Euro area.
- In Asia, Bank lending accounts for **160% of GDP**. **By contrast**, in US it is only **97% of GDP**.

# Funding in Asian Economies viz. a viz. Advanced Economies (Wyman, 2013)

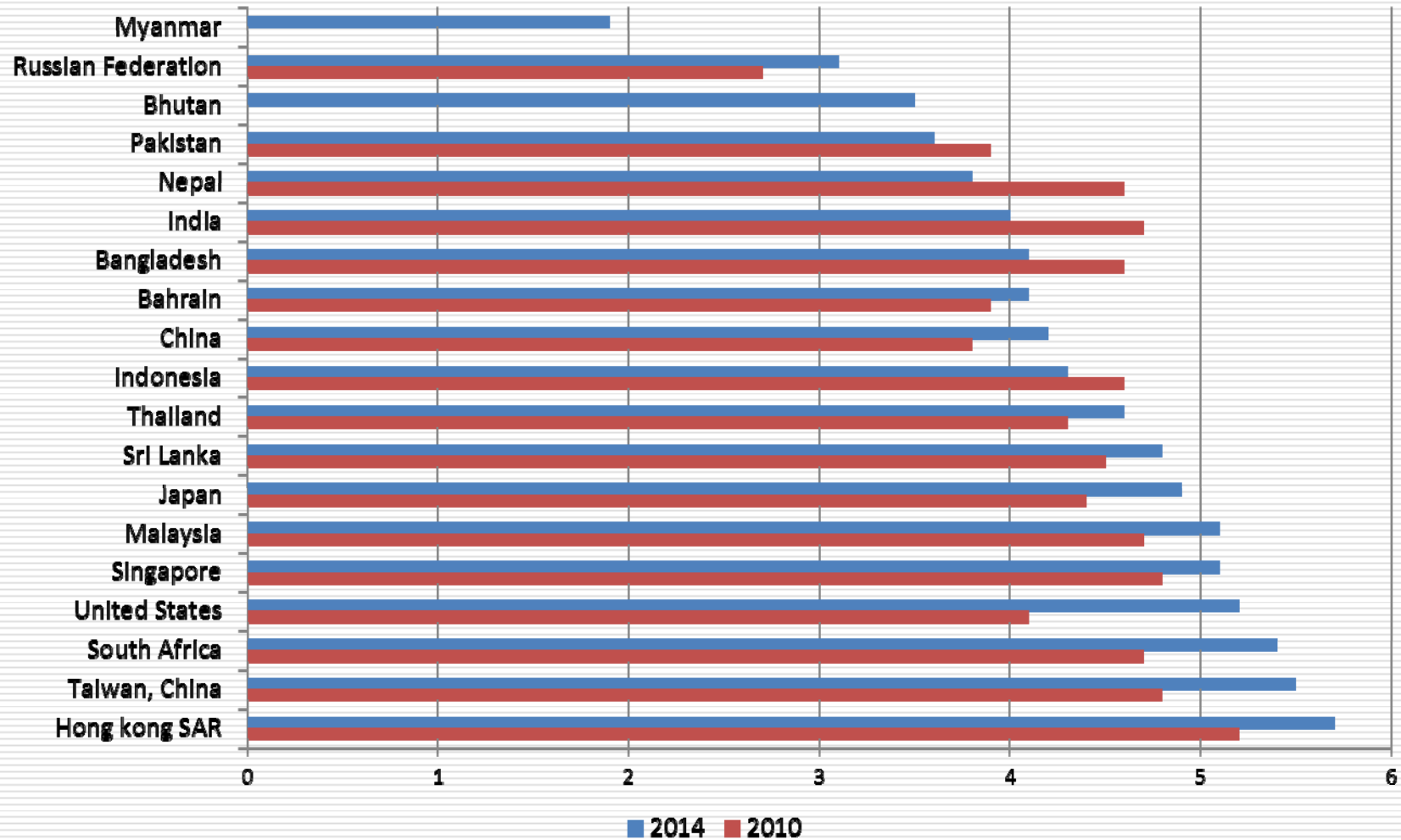


# Financing Through Local Equity Market: Rank and Index Value

		2013-14		2009-10	
	Country	Rank	Value	Rank	Value
1	Hong Kong SAR	1	5.7	2	5.2
2	Taiwan, China	2	5.5	4	4.8
3	South Africa	3	5.4	7	4.7
4	United States	6	5.2	36	4.1
5	Singapore	7	5.1	5	4.8
6	Malaysia	8	5.1	11	4.7
7	Japan	12	4.9	24	4.4
8	Sri Lanka	15	4.8	17	4.5
9	Thailand	18	4.6	28	4.3
10	Indonesia	29	4.3	13	4.6
11	China	34	4.2	52	3.8
12	Bahrain	36	4.1	51	3.9
13	Bangladesh	37	4.1	12	4.6
14	India	39	4	10	4.7
15	Nepal	47	3.8	14	4.6
16	Pakistan	61	3.6	43	3.9
17	Bhutan	68	3.5	-	-
18	Russian Federation	86	3.1	107	2.7
19	Myanmar	137	1.9	-	-

# Financing Through Local Equity Market: Index Value

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# Paucity of “real money” Long-Term Investors

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- Insurance and pension funds are still underdeveloped in Emerging Asia. While insurance and pension assets in Asia are only 38% the size of bank assets, in the US it is about 150%. In China, it is even lower at only 11%.
- Insurance and Pension Penetration as a % of GDP is less than 20% in most emerging economies of Asia, as compared to 130% in Australia, 152% in the US and 64% in the Euro region.
- Most Asians still depend on “traditional” retirement support of their children, rather than institutionally funded support from insurance companies or pension funds. Only Malaysia has a mandatory pension coverage.

## Weakness in the ability to maintain Financial Stability

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- ❖ Lack capability to **stress test** their systems; say on account of real estate price drops. This is on account of lower levels of financial data availability
- ❖ Efforts of financial regulators in Asia are not well coordinated. Hence **lack Asian voice** regarding regulations initiated by the West, such as Basel III.

# Good government governance and Impact Assessment remains paramount

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- The government needs to have a supportive environment towards PPPs.
- Governments must have a clear criterion, applied consistently, for determining whether projects become PPPs.
- At its end, the government must prepare a clear PPP pipeline by an early announcement of the same.
- Procurement inefficiencies related to high bid costs can be reduced by avoiding further bid stages; and seeking less information requirements; It should also recruit quality government project team members that promote sharing of skills and knowledge between teams.

Additionally, impact assessment of the PPP project should be insisted upon, especially in the context of its impact on poor and marginalized.

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# Section 7

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Conclusion and Policy Implications

## Recommendations for Policy Makers

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- ❖ Should **co-ordinate** their regional policies to create an efficient and regionally **integrated** financial sector
- ❖ Should increase **transparency** to reduce information asymmetries. Should also facilitate **information sharing** and build capabilities for centrally **run stress tests**.
- ❖ Should **standardize processes** and listing requirements for efficient **capital markets**.
- ❖ Should provide **tax incentives** to encourage **long-term funding**.
- ❖ Embrace more sustainable finance model through **risk sharing** and partnering as equity holders.

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Thank You

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